

GenCore version 5.1.6
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CM protein - protein search, using sw model

Run on: March 3, 2004, 07:50:54 ; Search time 48.1446 Seconds
(without alignments)
651.429 Million cell updates/sec

Title: US-09-852-261-4

Perfect score: 599

Sequence: 1 GPETLGAELVDALQFVCGP.....THKRKLQRRKSTLEHHK 111

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1586107 seqs, 282547505 residues

Total number of hits satisfying chosen parameters: 1586107

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Database : A_Geneseq_29Jan04:*

- 1: Geneseq1980s:*
- 2: Geneseq1990s:*
- 3: Geneseq2000s:*
- 4: Geneseq2001s:*
- 5: Geneseq2002s:*
- 6: Geneseq2003as:*
- 7: Geneseq2003bs:*
- 8: Geneseq2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | Query Match | Length | DB ID | Description |
|------------|-------|-------------|--------|-------|--------------------|
| 1 | 599 | 100.0 | 111 | 4 | AAE02448 Rat IGF-I |
| 2 | 599 | 100.0 | 111 | 5 | AAU10560 Rat mecha |
| 3 | 599 | 100.0 | 111 | 7 | ABR63168 Rat mecha |
| 4 | 537 | 89.6 | 133 | 6 | ABP58085 Mouse ins |
| 5 | 537 | 89.6 | 133 | 7 | ADA23374 Mouse MGF |
| 6 | 536 | 89.5 | 181 | 7 | AD557466 Rat Prote |
| 7 | 512 | 85.5 | 111 | 4 | AAE02449 Rabbit IG |
| 8 | 512 | 85.5 | 111 | 5 | AAU10561 Rabbit me |
| 9 | 512 | 85.5 | 111 | 7 | ABR63169 Rabbit me |
| 10 | 512 | 85.5 | 121 | 2 | AAW23301 Rabbit in |
| 11 | 494.5 | 82.6 | 110 | 4 | AAE02447 Human IGF |
| 12 | 494.5 | 82.6 | 110 | 5 | AAU10559 Human mec |
| 13 | 494.5 | 82.6 | 110 | 7 | ABR63167 Human mec |
| 14 | 471 | 78.6 | 105 | 4 | AAE02531 Rat liver |
| 15 | 471 | 78.6 | 105 | 4 | AAE02451 Rat liver |
| 16 | 471 | 78.6 | 105 | 5 | AAU10563 Rat liver |
| 17 | 471 | 78.6 | 105 | 7 | ABR63171 Rat liver |
| 18 | 464 | 77.5 | 195 | 1 | AAU10563 Rat liver |
| 19 | 443 | 74.0 | 153 | 7 | ADP70277 Sequence |
| 20 | 443 | 73.5 | 127 | 7 | ADA23373 Rat Prote |
| 21 | 423 | 70.6 | 105 | 4 | AAE02450 Human ins |
| 22 | 423 | 70.6 | 105 | 5 | AAU10562 Human ins |
| 23 | 423 | 70.6 | 105 | 7 | ABR63170 Human ins |
| 24 | 423 | 70.6 | 137 | 4 | AAU09067 Human ins |
| 25 | 423 | 70.6 | 153 | 2 | AAE83803 Insulin-1 |

| | | | | | |
|----|-------|------|-----|---|--------------------|
| 26 | 423 | 70.6 | 153 | 2 | AAE69733 Human IGF |
| 27 | 423 | 70.6 | 153 | 2 | AAW57882 Human IGF |
| 28 | 423 | 70.6 | 153 | 5 | AAU84284 Human end |
| 29 | 423 | 70.6 | 153 | 5 | AAU84341 Protein I |
| 30 | 423 | 70.6 | 153 | 6 | ADA26451 Human ins |
| 31 | 423 | 70.6 | 153 | 7 | ADCS9343 Human ins |
| 32 | 423 | 70.6 | 153 | 7 | ADD25494 Binding d |
| 33 | 423 | 70.6 | 154 | 2 | AAU0844 Goat insu |
| 34 | 423 | 70.6 | 156 | 2 | AAE23302 Human ins |
| 35 | 420 | 70.1 | 105 | 4 | AAE02452 Rabbit I1 |
| 36 | 420 | 70.1 | 105 | 5 | AAU10564 Rabbit in |
| 37 | 417 | 69.6 | 105 | 7 | ABR63172 Rabbit I1 |
| 38 | 416 | 69.4 | 119 | 1 | AAE60578 Human pre |
| 39 | 414 | 69.1 | 105 | 4 | AAE02456 Rabbit I1 |
| 40 | 412.5 | 68.9 | 191 | 2 | AAE4068 Human ins |
| 41 | 412.5 | 68.9 | 191 | 5 | AAE24881 Yeast alp |
| 42 | 367 | 61.3 | 78 | 3 | AAU98482 Pep 17 us |
| 43 | 367 | 61.3 | 78 | 3 | AAU59027 Peptide 1 |
| 44 | 367 | 61.3 | 78 | 4 | AAE45835 Nucleic a |
| 45 | 367 | 61.3 | 78 | 4 | AAU04272 Nuclear 1 |

ALIGNMENTS

| | | |
|----------|---|-------------------------------------|
| RESULT 1 | AAE02448 | AAE02448 standard; protein; 111 AA. |
| ID | AAE02448 | |
| AC | AAE02448; | |
| XX | | |
| DT | 10-AUG-2001 (first entry) | |
| XX | | |
| DE | Rat IGF-I isoform mechano-growth factor (MGF) protein. | |
| XX | | |
| KW | Rat; IGF-I isoform; Insulin-like Growth Factor-I; MGF; | |
| KW | mechano-growth factor; neurological disorder; neurodegenerative disorder; | |
| KW | amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; | |
| KW | poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; | |
| KW | nerve damage; autosomal muscular dystrophy; diabetic neuropathy; | |
| KW | sex-linked muscular dystrophy; peripheral neuropathy; | |
| KW | Alzheimer's disease; Parkinson's disease. | |
| XX | | |
| OS | Rattus sp. | |
| XX | | |
| PN | W0200136483-A1. | |
| XX | | |
| PD | 25-MAY-2001. | |
| XX | | |
| PF | 15-NOV-2000; 2000MO-GB004354. | |
| XX | | |
| PR | 15-NOV-1999; 99GB-00026968. | |
| XX | | |
| PA | (UNLO) UNIV COLLEGE LONDON. | |
| XX | | |
| PI | Goldspink G, Johnson I; | |
| XX | | |
| WP | WPI, 2001-355620/37. | |
| DR | N-PSDB; AAD06399. | |
| XX | | |
| PT | Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder. | |
| XX | | |
| PS | Claim 4; Page 52; 66pp; English. | |
| XX | | |
| CC | The present invention relates to use of mechano-growth factor (MGF), an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motoneurone loss by 20% or greater in response to nerve avulsion. The MGF polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder. | |

CC specification. However it differs at a single position

XX Sequence 105 AA;

Query Match 78.6%; Score 471; DB 4; Length 105;
Best Local Similarity 100.0%; Pred. No. 4.8e-39;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

| | | | |
|----|----|--|----|
| Qy | 1 | GPETLCGAELVDALQFVCGPRGFYFNKPTYYGSSIRAPOTGIYDECCFRSCDLRLRMY | 60 |
| | | | |
| Db | 1 | GPETLCGAELVDALQFVCGPRGFYFNKPTYYGSSIRAPOTGIYDECCFRSCDLRLRMY | 60 |
| | | | |
| Qy | 61 | CVCKPTKSARSIRARHTDMPKTX | 86 |
| | | | |
| Db | 61 | CVCKPTKSARSIRARHTDMPKTX | 86 |
| | | | |

Search completed: March 3, 2004, 07:53:36
Job time : 48.146 secs

QY 61 CVRCKPTKSARSIRARQHTDMPKTKOSQPLSTHKRKLQRRRKSTLEERK 111
 Db 61 CAPLKPAKSAKSAVQAQHTDMPKTKQKQPPSTNKTKSQ-RRKSTLEERK 110

RESULT 14
 AAE02531
 ID AAE02531 standard; protein; 105 AA.
 AC AAE02531;
 XX
 XX
 DT 10-AUG-2001 (first entry)
 XX

DE Rat liver-type IGF-I isoform (L.IGF-I) protein, alternative version.
 XX
 XX Rat; IGF-I isoform; Insulin-like Growth Factor-I; MGF;
 KW mechano-growth factor; neurological disorder; neurodegenerative disorder;
 KW amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy;
 KW poliomyelitis; post-polio syndrome; toxin; motoneurone disorder;
 KW nerve damage; autosomal muscular dystrophy; diabetic neuropathy;
 KW sex-linked muscular dystrophy; peripheral neuropathy;
 KW Alzheimer's disease; Parkinson's disease; liver; L.IGF-I.
 XX
 XX Rattus sp.
 OS
 XX
 FH Key Location/Qualifiers
 FT Misc-difference 102 /note="Encoded by ACC"
 FT
 XX WO200136483-A1.
 XX
 XX 25-MAY-2001.
 PD
 XX 15-NOV-2000; 2000WO-GB004354.
 PF
 XX 15-NOV-1999; 99GB-00026968.
 FR
 XX (UNLO) UNIV COLLEGE LONDON.
 FA
 XX Goldspink G, Johnson I;
 PI
 XX MPI; 2001-355620/37.
 DR N-PSDB; AAD06404.
 DR
 XX
 XX Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I,
 PT capable of reducing motoneurone loss, in the manufacture of a medicament
 PT for the treatment of neurological disorder.
 XX
 XX Disclosure; Fig 9; 66pp; English.

XX The present invention relates to use of mechano-growth factor (MGF), an
 CC Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
 CC medicament for the treatment of neurological disorder. The MGF is capable
 CC of reducing motoneurone loss by 20% or greater in response to nerve
 CC avulsion, and effects motoneurone rescue, preferably adult motoneurone
 CC rescue. The MGF polynucleotide and polypeptide are useful in the
 CC manufacture of a medicament for the treatment of a neurological disorder,
 CC including a disorder of motoneurons and/or neurodegenerative disorder,
 CC e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive
 CC spinal muscular atrophy, infantile or juvenile muscular atrophy,
 CC poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
 CC toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an
 CC injury that affects motoneurons, motoneurone loss associated with aging,
 CC autosomal or sex-linked muscular dystrophy, diabetic neuropathy,
 CC peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The
 CC present sequence is alternative version of rat liver-type IGF-I isoform
 CC (L.IGF-I). The L.IGF-I protein comprises amino acid sequences encoded by
 CC nucleic acid sequence of IGF-I exons 4 and 6. Note: The present sequence
 CC is stated as being the same as SEQ ID NO: 12 shown in sequence listing
 CC (AAE02451) of the specification. However it differs at a single position
 CC
 XX Sequence 105 AA;
 SQ

Query Match 78.6%; Score 471; DB 4; Length 105;
 Best Local Similarity 100.0%; Pred. No. 4.8e-39;
 Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRRAPQTGIYDECCFRSCDRLRLMY 60
 Db 1 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRRAPQTGIYDECCFRSCDRLRLMY 60

QY 61 CVRCKPTKSARSIRARQHTDMPKTKOK 86
 Db 61 CVRCKPTKSARSIRARQHTDMPKTKOK 86

RESULT 15
 AAE02451
 ID AAE02451 standard; protein; 105 AA.
 AC AAE02451;
 XX
 XX
 DT 10-AUG-2001 (first entry)
 XX

DE Rat liver-type IGF-I isoform (L.IGF-I) protein.
 XX
 XX Rat; IGF-I isoform; Insulin-like Growth Factor-I; MGF;
 KW mechano-growth factor; neurological disorder; neurodegenerative disorder;
 KW amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy;
 KW poliomyelitis; post-polio syndrome; toxin; motoneurone disorder;
 KW nerve damage; autosomal muscular dystrophy; diabetic neuropathy;
 KW sex-linked muscular dystrophy; peripheral neuropathy;
 KW Alzheimer's disease; Parkinson's disease; liver; L.IGF-I.
 XX
 XX Rattus sp.
 OS
 XX
 XX WO200136483-A1.
 PN
 XX 25-MAY-2001.
 PD
 XX 15-NOV-2000; 2000WO-GB004354.
 PF
 XX 15-NOV-1999; 99GB-00026968.
 PR
 XX (UNLO) UNIV COLLEGE LONDON.
 PA
 XX Goldspink G, Johnson I;
 PI
 XX MPI; 2001-355620/37.
 DR N-PSDB; AAD06404.
 DR
 XX
 XX Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I,
 PT capable of reducing motoneurone loss, in the manufacture of a medicament
 PT for the treatment of neurological disorder.
 XX
 XX Disclosure; Page 58-59; 66pp; English.

XX The present invention relates to use of mechano-growth factor (MGF), an
 CC Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
 CC medicament for the treatment of neurological disorder. The MGF is capable
 CC of reducing motoneurone loss by 20% or greater in response to nerve
 CC avulsion, and effects motoneurone rescue, preferably adult motoneurone
 CC rescue. The MGF polynucleotide and polypeptide are useful in the
 CC manufacture of a medicament for the treatment of a neurological disorder,
 CC including a disorder of motoneurons and/or neurodegenerative disorder,
 CC e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive
 CC spinal muscular atrophy, infantile or juvenile muscular atrophy,
 CC poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
 CC toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an
 CC injury that affects motoneurons, motoneurone loss associated with aging,
 CC autosomal or sex-linked muscular dystrophy, diabetic neuropathy,
 CC peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The
 CC present sequence is rat liver-type IGF-I isoform (L.IGF-I). The L.IGF-I
 CC protein comprises amino acid sequences encoded by nucleic acid sequence
 CC of IGF-I exons 4 and 6. Note: The present sequence (SEQ ID NO: 12) is
 CC stated as being the same as that shown in figure 9 (AAE02531) of the

SQ Sequence 110 AA;

Query Match 82.6%; Score 494.5; DB 4; Length 110;
 Best Local Similarity 85.6%; Pred. No. 2.4e-41;
 Matches 95; Conservative 2; Mismatches 13; Indels 1; Gaps 1;

QY 1 GPEITLGAELVDALQVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLLEY 60
 DB 1 GPEITLGAELVDALQVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLLEY 60

QY 61 CVRCKPTKASIRAPQRTDMPKTKSQPLSTHKKRLQRRKSGSTLEENK 111
 DB 61 CAPLKPKASRVSRAQRTDMPKTKSQPLSTHKKRLQRRKSGSTLEENK 110

RESULT 12

AAU10559 ID AAU10559 standard; protein; 110 AA.

AAU10559; AC

25-FEB-2002 (first entry)

Human mechano-growth factor (MGF) polypeptide.

Human; mechano-growth factor; insulin-like growth factor I; IGF-I; MGF;
 neuroprotective; nerve damage; peripheral nervous system; nerve severing;
 muscle; neurological disorder; motoneuron loss; motoneuron disorder;
 nerve avulsion.

Homo sapiens.

MO200185781-A2.

15-NOV-2001.

10-MAY-2001; 2001MO-GB002054.

10-MAY-2000; 2000GB-00011278.

(UNLO) UNIV COLLEGE LONDON.

(EGRI) EAST GRINSTEAD MEDICAL RES TRUST.

Goldspink G, Terenghi G;

MPI; 2002-055585/07.

N-PSDB; AAS16877.

Use of insulin-like growth factor-I (IGF-I) isoform known as mechano
 growth factor which is encoded by IGF-I exons 4,5,6 and has ability to
 reduce motoneurone loss in response to nerve avulsion, to treat nerve
 damage.

Claim 11; Fig 5; 65pp; English.

The invention relates to the use of an insulin-like growth factor I (IGF-I) isoform, known as mechano-growth factor (MGF), in the manufacture of a medicament for treating nerve damage in the peripheral nervous system, or for treating nerve damage by localising MGF at the site of damage. The nerve damage may include severing of a nerve. The treatment may be combined with another treatment (such as a polypeptide growth factor other than MGF) that prevents or diminishes degeneration of the target organ (for example, muscle) which the damaged nerve innervates, whereby the treatment of the muscle with MGF or a polynucleotide encoding MGF prevents or diminishes degeneration. The method is useful for treating neurological disorders, preferably motoneuron disorders. These methods can reduce motoneuron loss by 20% or greater in response to nerve avulsion. This sequence represents the human MGF polypeptide

SQ Sequence 110 AA;

Query Match 82.6%; Score 494.5; DB 5; Length 110;
 Best Local Similarity 85.6%; Pred. No. 2.4e-41;

Matches 95; Conservative 2; Mismatches 13; Indels 1; Gaps 1;

QY 1 GPEITLGAELVDALQVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLLEY 60
 DB 1 GPEITLGAELVDALQVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLLEY 60

QY 61 CVRCKPTKASIRAPQRTDMPKTKSQPLSTHKKRLQRRKSGSTLEENK 111
 DB 61 CAPLKPKASRVSRAQRTDMPKTKSQPLSTHKKRLQRRKSGSTLEENK 110

RESULT 13

ABR63167 ID ABR63167 standard; protein; 110 AA.

ABR63167; AC

18-DEC-2003 (first entry)

Human mechano growth factor (C-terminal end).

Mechano growth factor; MGF; insulin-like growth factor I; human;
 splice variant; cardiac; vasotropic; gene therapy.

Homo sapiens.

MO2003066082-A1.

14-AUG-2003.

06-FEB-2003; 2003MO-GB000537.

07-FEB-2002; 2002GB-00002906.

(UNLO) UNIV COLLEGE LONDON.

(UNIL) UNIV ILLINOIS FOUND.

Goldspink G, Goldspink P;

MPI; 2003-636936/60.

N-PSDB; ACF79635.

Use of Mechano Growth Factor polypeptide or polynucleotide for preventing
 PT or limiting apoptosis in the myocardium, particularly for preventing or
 PT limiting myocardial damage in response to ischemia or mechanical overload
 of the heart.

Claim 5; Fig 7; 74pp; English.

The present sequence is that of the C-terminal end of novel human mechano
 growth factor (MGF), encoded by exons 3-6 of the IGF-I gene. MGF is a
 splice variant and non-liver type isoform of insulin-like growth factor
 (IGF-I) that is activated in response to cardiac tissue damage and which
 has a repair function in the ischaemic and/or overloaded heart. The human
 MGF transcript has a 49 base insert in the B domain that alters the
 CC reading frame and hence the C-terminal end of MGF protein in comparison
 CC with other IGF-I splice variants. The invention provides use of a MGF
 polypeptide or polynucleotide in the manufacture of a medicament for the
 CC prevention or limitation of myocardial damage in response to ischaemia or
 CC mechanical overload of the heart by preventing or limiting apoptosis in
 CC the myocardium. The MGF polypeptide, polynucleotide or medicament is also
 useful for administration in response to a heart attack

SQ Sequence 110 AA;

Query Match 82.6%; Score 494.5; DB 7; Length 110;
 Best Local Similarity 85.6%; Pred. No. 2.4e-41;
 Matches 95; Conservative 2; Mismatches 13; Indels 1; Gaps 1;

QY 1 GPEITLGAELVDALQVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLLEY 60
 DB 1 GPEITLGAELVDALQVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLLEY 60

CC ischaemia or mechanical overload of the heart by preventing or limiting
CC apoptosis in the myocardium. The MGF polypeptide, polynucleotide or
CC medicament is also useful for administration in response to a heart
CC attack

XX Sequence 111 AA;

SO Query Match 85.5%; Score 512; DB 7; Length 111;
Best Local Similarity 86.5%; Pred. No. 4.4e-43;
Matches 96; Conservative 3; Mismatches 12; Indels 0; Gaps 0;

QY 1 GPEITLGGALVDALQFVCGPRGFYFNKPTVYSSIRAPQGIYDECCFSCDLRLLEY 60
DB 1 GPEITLGGALVDALQFVCGPRGFYFNKPTVYSSIRAPQGIYDECCFSCDLRLLEY 60
QY 61 CVRCKPTKSARSIRARHTDMPKTKOKSPLSTHKRKLQRRKSGSTLEEHK 111
DB 61 CAPLKPAAKASVRAQRHTDMPKTKOKYQPSPTNKKMSQRRRKSGSTLEEHK 111

RESULT 10

AAW23301
ID AAW23301 standard; protein; 121 AA.

XX AAW23301;

XX 14-APR-1998 (first entry)

DE Rabbit insulin like growth factor 1.

XX Insulin like growth factor 1; IGF-1; Ec peptide; muscle disorder; heart;

KW neuromuscular disease.

XX Oryctolagus cuniculus.

XX WO9733997-A1.

XX 18-SEP-1997.

XX 11-MAR-1997; 97WO-GB000658.

XX 11-MAR-1996; 96GB-00005124.

XX (UNLO) ROYAL FREE HOSPITAL SCHOOL MED.

PI Goldspink G;

DR WPI; 1997-470877/43.

DR N-PSDB; AAT84893.

PT Use of insulin like growth factor I characterised by presence of Ec
PT peptide - to treat humans or animals, particularly muscle disorders,
PT heart conditions or neuromuscular diseases.

XX Disclosure; Fig 3; 33pp; English.

XX A use of insulin like growth factor I (IGF-1) has been developed, and is
CC characterised by the presence of the Ec peptide, or a functional
CC equivalent, in the treatment or therapy of a human or animal. The IGF-1
CC polypeptide can be used to treat muscular disorders, e.g. Duchenne or
CC Becker muscular dystrophy, autosomal dystrophies and related progressive
CC skeletal muscle weakness and wasting, muscle atrophy in ageing humans,
CC spinal cord injury induced muscle atrophy and neuromuscular diseases, and
CC cardiac disorders, e.g. diseases where promotion of cardiac muscle
CC protein synthesis is a beneficial treatment, cardiomyopathies and acute
CC heart failure or insult, specifically myocarditis or myocardial
CC infarction. It can also be used to promote bone fracture healing and
CC maintenance of bone in old age. The present sequence represents rabbit
CC IGF-1 used in the present specification

XX Sequence 121 AA;

Query Match 85.5%; Score 512; DB 2; Length 121;

Best Local Similarity 86.5%; Pred. No. 4.8e-43;
Matches 96; Conservative 3; Mismatches 12; Indels 0; Gaps 0;

QY 1 GPEITLGGALVDALQFVCGPRGFYFNKPTVYSSIRAPQGIYDECCFSCDLRLLEY 60
DB 11 GPEITLGGALVDALQFVCGPRGFYFNKPTVYSSIRAPQGIYDECCFSCDLRLLEY 70

QY 61 CVRCKPTKSARSIRARHTDMPKTKOKSPLSTHKRKLQRRKSGSTLEEHK 111
DB 71 CAPLKPAAKASVRAQRHTDMPKTKOKYQPSPTNKKMSQRRRKSGSTLEEHK 121

RESULT 11

AAE02447
ID AAE02447 standard; protein; 110 AA.

XX AAE02447;

XX 10-AUG-2001 (first entry)

DE Human IGF-I isoform mechano-growth factor (MGF) protein.

XX Human; IGF-I isoform; Insulin-like Growth Factor-I; MGF;

KW mechano-growth factor; neurological disorder; neurodegenerative disorder;

KW amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy;

KW poliomyelitis; post-polio syndrome; toxin; motoneurone disorder;

KW nerve damage; autosomal muscular dystrophy; diabetic neuropathy;

KW sex-linked muscular dystrophy; peripheral neuropathy;

XX Alzheimer's disease; Parkinson's disease.

XX Homo sapiens.

XX WO200136483-A1.

XX 25-MAY-2001.

XX 15-NOV-2000; 2000WO-GB004354.

XX 15-NOV-1999; 99GB-00026968.

XX (UNLO) UNIV COLLEGE LONDON.

PI Goldspink G; Johnson I;

DR WPI; 2001-355620/37.

DR N-PSDB; AAD06398.

PT Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I,
PT capable of reducing motoneurone loss, in the manufacture of a medicament
PT for the treatment of neurological disorder.

XX Claim 4; Page 50-51; 66pp; English.

XX The present invention relates to use of mechano-growth factor (MGF), an
CC Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
CC medicament for the treatment of neurological disorder. The MGF is capable
CC of reducing motoneurone loss by 20% or greater in response to nerve
CC avulsion, and effects motoneurone rescue, preferably adult motoneurone
CC rescue. The MGF polynucleotide and polypeptide are useful in the
CC manufacture of a medicament for the treatment of a neurological disorder,
CC including a disorder of motoneurons and/or neurodegenerative disorder,
CC e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive
CC spinal muscular atrophy, infantile or juvenile muscular atrophy,
CC poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
CC toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an
CC injury that affects motoneurons, motoneurone loss associated with aging,
CC autosomal or sex-linked muscular dystrophy, diabetic neuropathy,
CC peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The
CC present sequence is human IGF-I isoform MGF. MGF is a muscle isoform
CC having extracellular (Ec) domain, hence also referred as IGF-I-Ec. The
CC MGF protein comprises amino acid sequences encoded by nucleic acid
CC sequence of IGF-I exons 4, 5 and 6 in the reading frame of MGF

CC manufacture of a medicament for the treatment of a neurological disorder,
 CC including a disorder of motoneurons and/or neurodegenerative disorder,
 CC e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive
 CC spinal muscular atrophy, infantile or juvenile muscular atrophy,
 CC poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
 CC toxin, motoneuron trauma, a motoneuron lesion or nerve damage, an
 CC injury that affects motoneurons, motoneuron loss associated with aging,
 CC autosomal or sex-linked muscular dystrophy, diabetic neuropathy,
 CC peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The
 CC present sequence is rabbit IGF-I isoform MGF. MGF is a muscle isoform
 CC having extracellular (EC) domain, hence also referred as IGF-I-EC. The
 CC MGF protein comprises amino acid sequences encoded by nucleic acid
 CC sequence of IGF-I exons 4, 5 and 6 in the reading frame of MGF
 CC XX
 SQ Sequence 111 AA;

Query Match 85.5%; Score 512; DB 4; Length 111;
 Best Local Similarity 86.5%; Pred. No. 4.4e-43;
 Matches 96; Conservative 3; Mismatches 12; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQVCGRGFYFNKPTVYSSIRAPOTGIVDECCRSCLRLLEY 60
 DB 1 GPEITCGAELVDALQVCGRGFYFNKPTVYSSIRAPOTGIVDECCRSCLRLLEY 60
 QY 61 CVRCKPTKSARSIRARHTDMPKTKSQPLSTHKRKLQRRRKGSTLEEHK 111
 DB 61 CAPLKPAAKARSVRAQRHTDMPKTKSQPLSTHKRKLQRRRKGSTLEEHK 111

RESULT 8
 AAU10561
 ID AAU10561 standard; protein; 111 AA.

AC AAU10561;

DT 25-FEB-2002 (first entry)

DE Rabbit mechano-growth factor (MGF) polypeptide.

XX Rabbit; mechano-growth factor; insulin-like growth factor I; IGF-I; MGF;
 KM neuropeptide; nerve damage; peripheral nervous system; nerve severing;
 KM muscle; neurological disorder; motoneuron loss; motoneuron disorder;
 KM nerve avulsion.

XX Oryctolagus cuniculus.

XX WO200185781-A2.

XX 15-NOV-2001.

XX 10-MAY-2001; 2001WO-GB002054.

XX 10-MAY-2000; 2000GB-00011278.

XX (UNLO) UNIV COLLEGE LONDON.

XX (EGRI-) EAST GRINSTEAD MEDICAL RES TRUST.

XX Goldspink G, Terenghi G;

XX WPI; 2002-055585/07.

XX N-PSDB; AAS16879.

PT Use of insulin-like growth factor-I (IGF-I) isoform known as mechano
 CC growth factor which is encoded by IGF-I exons 4,5,6 and has ability to
 CC reduce motoneuron loss in response to nerve avulsion, to treat nerve
 CC damage.

PS Claim 1; Fig 7; 65pp; English.

CC The invention relates to the use of an insulin-like growth factor I (IGF-
 CC I) isoform, known as mechano-growth factor (MGF), in the manufacture of a
 CC medicament for treating nerve damage in the peripheral nervous system, or
 CC for treating nerve damage by localising MGF at the site of damage. The

CC nerve damage may include severing of a nerve. The treatment may be
 CC combined with another treatment (such as a polypeptide growth factor
 CC other than MGF) that prevents or diminishes degeneration of the target
 CC organ (for example, muscle) which the damaged nerve innervates, whereby
 CC the treatment of the muscle with MGF or a polynucleotide encoding MGF
 CC prevents or diminishes degeneration. The method is useful for treating
 CC neurological disorders, preferably motoneuron disorders. These methods
 CC can reduce motoneuron loss by 20% or greater in response to nerve
 CC avulsion. This sequence represents the rabbit MGF polypeptide
 CC XX
 SQ Sequence 111 AA;

Query Match 85.5%; Score 512; DB 5; Length 111;
 Best Local Similarity 86.5%; Pred. No. 4.4e-43;
 Matches 96; Conservative 3; Mismatches 12; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQVCGRGFYFNKPTVYSSIRAPOTGIVDECCRSCLRLLEY 60
 DB 1 GPEITCGAELVDALQVCGRGFYFNKPTVYSSIRAPOTGIVDECCRSCLRLLEY 60
 QY 61 CVRCKPTKSARSIRARHTDMPKTKSQPLSTHKRKLQRRRKGSTLEEHK 111
 DB 61 CAPLKPAAKARSVRAQRHTDMPKTKSQPLSTHKRKLQRRRKGSTLEEHK 111

RESULT 9
 ABR63169
 ID ABR63169 standard; protein; 111 AA.

AC ABR63169;

DT 18-DEC-2003 (first entry)

DE Rabbit mechano growth factor (C-terminal end).

XX Mechano growth factor; MGF; insulin-like growth factor I; rabbit;
 KM splice variant; cardiant; vasotropic; gene therapy.
 XX Oryctolagus cuniculus.

XX WO2003066082-A1.

XX 14-AUG-2003.

XX 06-FEB-2003; 2003WO-GB000537.

XX 07-FEB-2002; 2002GB-00002906.

XX (UNLO) UNIV COLLEGE LONDON.

XX (UNIL) UNIV ILLINOIS FOUNDD.

XX Goldspink G, Goldspink P;

XX WPI; 2003-636936/60.

XX N-PSDB; ACP79637.

PT Use of Mechano Growth Factor polypeptide or polynucleotide for preventing
 CC or limiting apoptosis in the myocardium, particularly for preventing or
 CC limiting myocardial damage in response to ischemia or mechanical overload
 CC of the heart.

PS Claim 5; Fig 9; 74pp; English.

CC The present sequence is that of the C-terminal end of novel rabbit
 CC mechano growth factor (MGF), encoded by exons 3-6 of the IGF-I gene. MGF
 CC is a splice variant and non-liver type isoform of insulin-like growth
 CC factor (IGF-I) that is activated in response to cardiac tissue damage and
 CC which has a repair function in the ischaemic and/or overloaded heart. The
 CC rabbit MGF transcript has a 52 base insert in the E domain that alters
 CC the reading frame and hence the C-terminal end of MGF protein in
 CC comparison with other IGF-I splice variants. The invention provides use
 CC of a MGF polypeptide or polynucleotide in the manufacture of a medicament
 CC for the prevention or limitation of myocardial damage in response to

CC amino acid sequence, which is given in comparison with mouse insulin
CC growth factor I (IGF1) in the exemplification of the present invention.

XX Sequence 133 AA;

Query Match 89.6%; Score 537; DB 7; Length 133;
Best Local Similarity 91.0%; Pred. No. 1.8e-45;
Matches 101; Conservative 2; Mismatches 8; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLRLEMY 60
DB 23 GPEITCGAEIVDALQFVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLRLEMY 82

QY 61 CVRCKPTKSARSIRAPQRTDMPKTKQKQPLSTHKRKLQRRKSGSTLEBK 111
DB 83 CAPLKPTKSARSIRAPQRTDMPKTKQKQPLSTHKRKLQRRKSGSTLEBK 133

RESULT 6

ADE57466 standard; protein; 181 AA.

AC ADE57466;
DT 29-JAN-2004 (first entry)

DE Rat Protein P08024, SEQ ID NO 3327.

XX Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury;
XX chronic constriction injury; CCI; spared nerve injury; SNI; Chung.

OS Rattus norvegicus.

PN WO2003016475-A2.

PD 27-FEB-2003.

PF 14-AUG-2002; 2002WO-US025765.

PR 14-AUG-2001; 2001US-0312147P.

PR 01-NOV-2001; 2001US-0346382P.

PR 26-NOV-2001; 2001US-0333347P.

PA (GEHO) GEN HOSPITAL CORP.

PA (FARB) BAYER AG.

PI Woolf C, D'urso D, Befort K, Costigan M;

DR WPI, 2003-268312/26.

DR GENBANK; F08024.

PT New composition comprising two or more isolated polypeptides, useful for

PT preparing a medicament for treating pain in an animal.

PS Claim 1; Page; 1017pp; English.

XX The invention discloses a composition comprising two or more isolated rat
XX or human polynucleotides or a polynucleotide which represents a fragment,
XX derivative or allelic variation of the nucleic acid sequence. Also
XX claimed are a vector comprising the novel polynucleotide, a host cell
XX comprising the vector, a method for identifying a nucleotide sequence
XX which is differentially regulated in an animal subjected to pain and a
XX kit to perform the method, an array, a method for identifying a sequence
XX that increases or decreases the expression of the polynucleotide sequence
XX that is differentially expressed in neuronal tissue of a first animal
XX subjected to pain, a method for identifying a compound which regulates
XX the expression of a polynucleotide sequence which is differentially
XX expressed in an animal subjected to pain, a method for identifying a
XX compound that regulates the activity of one or more of the
XX polynucleotides, a method for producing a pharmaceutical composition, a
XX method for identifying a compound or more of the polypeptides given in the
XX activity in an animal of one or more of the polypeptides given in the
XX specification, a method for identifying a compound useful in treating

CC pain and a pharmaceutical composition comprising the one or more

CC polypeptides or their antibodies. The polynucleotide or the compound that

CC mediates its activity is useful for preparing a medicament for treating

CC pain (e.g. spinal segmental nerve injury (Chung), chronic constriction

CC injury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene

CC therapy). The sequence presented is a rat protein (shown in Table 2 of

CC the specification) which is differentially expressed during pain. Note:

CC The sequence data for this patent did not form part of the printed

CC specification, but was obtained in electronic form directly from WIPO at

ftp.wipo.int/pub/published_pat_sequences.

XX Sequence 181 AA;

Query Match 89.5%; Score 536; DB 7; Length 181;
Best Local Similarity 94.3%; Pred. No. 3e-45;
Matches 100; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLRLEMY 60
DB 49 GPEITCGAEIVDALQFVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLRLEMY 108

QY 61 CVRCKPTKSARSIRAPQRTDMPKTKQKQPLSTHKRKLQRRKSGSTLEBK 106
DB 109 CAPLKPTKSARSIRAPQRTDMPKTKQKQPLSTHKRKLQRRKSGES 154

RESULT 7
AAE02449 standard; protein; 111 AA.

AC AAE02449;

DT 10-AUG-2001 (first entry)

DE Rabbit IGF-I isoform mechano-growth factor (MGF) protein.

XX Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF;

XX mechano-growth factor; neurological disorder; neurodegenerative disorder;

XX amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy;

XX poliomyelitis; post-polio syndrome; toxin; motoneurone disorder;

XX nerve damage; autosomal muscular dystrophy; diabetic neuropathy;

XX sex-linked muscular dystrophy; peripheral neuropathy;

XX Alzheimer's disease; Parkinson's disease.

XX Oryctolagus cuniculus.

XX WO200136483-A1.

XX 25-MAY-2001.

XX 15-NOV-2000; 2000WO-GB004354.

XX 15-NOV-1999; 99GB-00026968.

XX (UNLO) UNIV COLLEGE LONDON.

XX Goldspink G, Johnson I;

XX WPI, 2001-355620/37.

XX N-PSDB; AAD06400.

PT Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I,
PT capable of reducing motoneurone loss, in the manufacture of a medicament
PT for the treatment of neurological disorder.
PS Claim 4; Page 54; 66pp; English.

XX The present invention relates to use of mechano-growth factor (MGF), an
XX Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
XX medicament for the treatment of neurological disorder. The MGF is capable
XX of reducing motoneurone loss by 20% or greater in response to nerve
XX avulsion, and effects motoneurone rescue, preferably adult motoneurone
XX rescue. The MGF polynucleotide and polypeptide are useful in the

CC the myocardium. The MGF polypeptide, polynucleotide or medicament is also
CC useful for administration in response to a heart attack

XX Sequence 111 AA;

Query Match 100.0%; Score 599; DB 7; Length 111;
Best Local Similarity 100.0%; Pred. No. 1.1e-51;
Matches 111; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITCGAEVLDALQVCGPRGFYFNKPTVYSSIRRAPQGTIVDECCFRSCDLRLRLEY 60
DB 1 GPEITCGAEVLDALQVCGPRGFYFNKPTVYSSIRRAPQGTIVDECCFRSCDLRLRLEY 60
QY 61 CVRCKPTKARSIRAPQRTDMPKTKQSOPSLTHKKRKLQRRKSGSTLEEHK 111
DB 61 CVRCKPTKARSIRAPQRTDMPKTKQSOPSLTHKKRKLQRRKSGSTLEEHK 111

RESULT 4

ABP58085
ID ABP58085 standard; protein; 133 AA.

XX ABP58085;

DT 07-MAR-2003 (first entry)

DE Mouse insulin-like growth factor IB.

XX Insulin-like growth factor IB; IGF-IB; mouse; mRNA; assay;
KW nucleic acid detection.

OS Mus musculus.

PN WO200297390-A2.

PD 05-DEC-2002.

XX 31-MAY-2002; 2002WO-SE001056.

XX 01-JUN-2001; 2001SE-00001934.

PA (BIOV-) BIOVITRUM AB.

PI Parrow V, Rosengren L;

DR WPI; 2003-129529/12.

DR N-PSDB; ABV76185.

PT Quantitating a target nucleic acid in a sample comprises immobilizing, on
PT a solid support, a sample comprising a target nucleic acid, and detecting
PT and quantitating signals generated from the antisense and sense probes.

XX Example 1; Page 17; 18pp; English.

XX The present sequence is the protein sequence of murine insulin-like
XX growth factor IB (IGF-IB). IGF-IB cDNA was used in an example of the
XX method of the invention to generate probes for determination of IGF-IB
XX RNA. The method comprises a quantitative hybridisation assay for analysis
XX of mRNA in a target nucleic acid (TNA) sample. It involves: (1)
XX immobilising the TNA sample on a solid support; (1i) contacting a
XX labelled antisense probe to a first portion of the TNA, and a labelled
XX sense probe to a second portion of the TNA; (1ii) detecting and
XX quantitating the signals generated from the hybridised probes; and (1v)
XX determining the value represented by the antisense probe signal minus the
XX sense probe signal, the value being proportional to the amount of mRNA in
XX the TNA sample. In an example of the method, a cDNA clone containing 60
XX nucleotides from exon 2 and 179 nucleotides from exon 3 of the mouse IGF-
XX IB gene was cloned into pGEM-4Z vector. Linearisation of the plasmid with
XX EcoRI allowed transcription of a 250-nucleotide antisense probe using T7
XX polymerase. Linearisation with HindIII allowed transcription of a sense
XX probe of similar length using SP6 polymerase (see ABV76186). The probes
XX were purified and used to determine IGF-I RNA in mouse hepatocytes and
XX also in rat hepatocytes

XX Sequence 133 AA;

Query Match 89.6%; Score 537; DB 6; Length 133;
Best Local Similarity 91.0%; Pred. No. 1.8e-45;
Matches 101; Conservative 2; Mismatches 8; Indels 0; Gaps 0;

QY 1 GPEITCGAEVLDALQVCGPRGFYFNKPTVYSSIRRAPQGTIVDECCFRSCDLRLRLEY 60
DB 23 GPEITCGAEVLDALQVCGPRGFYFNKPTVYSSIRRAPQGTIVDECCFRSCDLRLRLEY 82
QY 61 CVRCKPTKARSIRAPQRTDMPKTKQSOPSLTHKKRKLQRRKSGSTLEEHK 111
DB 83 CAPLCKTKARSIRAPQRTDMPKTKQSOPSLTHKKRKLQRRKSGSTLEEHK 133

RESULT 5

ADA23374
ID ADA23374 standard; protein; 133 AA.

XX ADA23374;

DT 20-NOV-2003 (first entry)

DE Mouse MGF amino acid sequence.

XX ligand; antibody; mechano-growth factor; MGF; inotropic; cardiant;
KW cell signaling; muscle damage; muscular dystrophy; cardiac muscle damage;
KW muscle fatigue; heart attack.

OS Mus sp.

PN WO2003068949-A1.

PD 21-AUG-2003.

XX 14-FEB-2003; 2003WO-GB000657.

XX 14-FEB-2002; 2002GB-00003552.

PA (BEAU/) BEAUMONT N.

PI Beaumont N;

DR WPI; 2003-679637/64.

PT New peptides corresponding to the C terminus of creatine kinase have a
PT similar function to mechano-growth factor and are useful to treat muscle
PT damage such as exercise injury, muscular dystrophy and heart attack
PT damage.

XX Disclosure; Fig 1; 21pp; English.

XX The present invention describes an isolated peptide capable of acting as
XX a ligand for an antibody with affinity for the C-terminus of mechano-
XX growth factor (MGF), for use in therapy, where the peptide is not MGF.
XX Also described is an isolated peptide for use in therapy comprising the
XX sequence (I) (X1)m(X2)n(X3)G(X4)(X5)(X6)(X7)2(X8)p, where X1 = a basic
XX residue, X2 and X8 = any amino acid, X3 and X4 = Lys or Glu, m = 2 or 3, n = 0
XX -2, and p = 2-6. (I) has inotropic and cardiant activities, and can be
XX used in cell signaling. (I) can be used for the manufacture of a
XX composition for the treatment of muscle damage, deterioration or injury,
XX particularly damage to skeletal muscle, especially muscular dystrophy or
XX damage to cardiac muscle, and to manufacture a composition for the repair
XX of damage or loss of nerve cells. The peptide can be used in cell culture
XX media to promote growth of muscle or nerve cell lines. The peptides are
XX used to treat conditions associated with muscle fatigue and/or injury for
XX example during exercise, and to treat muscle deterioration or damage for
XX example after a heart attack. They may be useful to identify agents that
XX potentiate or inhibit muscle or nerve cell growth, as a treatment to
XX promote growth or repair of muscle or nerve cells in vivo and to inhibit
XX apoptosis of precursor cells. The present sequence represents a mouse MGF

including a disorder of motoneurons and/or neurodegenerative disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, poliomyelitis or post-polio syndrome, a disorder caused by exposure to a toxin, motoneuron trauma, a motoneuron lesion or nerve damage, an injury that affects motoneurons, motoneuron loss associated with aging, autosomal or sex-linked muscular dystrophy, diabetic neuropathy, peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is rat IGF-I isoform MGF. MGF is a muscle isoform having extracellular (Ec) domain, hence also referred as IGF-I-Ec. The MGF protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4, 5 and 6 in the reading frame of MGF

Sequence 111 AA;

Query Match 100.0%; Score 599; DB 4; Length 111;
Best Local Similarity 100.0%; Pred. No. 1.1e-51;
Matches 111; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITLGAELVDALQFVCGPRGFYFNKPTVYSSIRAPQTGIYDECCFRSCDLRLMEY 60
DB 1 GPEITLGAELVDALQFVCGPRGFYFNKPTVYSSIRAPQTGIYDECCFRSCDLRLMEY 60

QY 61 CVRCKPTKSARSIRARHTDMPKTKSQPLSTHKKRKLQRRRKGSTLEEHK 111
DB 61 CVRCKPTKSARSIRARHTDMPKTKSQPLSTHKKRKLQRRRKGSTLEEHK 111

RESULT 2

AAU10560
ID AAU10560 standard; protein; 111 AA.

AC AAU10560;

DT 25-FEB-2002 (first entry)

DE Rat mechano-growth factor (MGF) polypeptide.

XX Rat; mechano-growth factor; insulin-like growth factor I; IGF-I; MGF;
XX neuromuscular; nerve damage; peripheral nervous system; nerve severing;
XX muscle; neurological disorder; motoneuron loss; motoneuron disorder;
XX nerve avulsion.

OS Rattus sp.

PN MO200185781-A2.

PD 15-NOV-2001.

PF 10-MAY-2001; 2001WO-GB002054.

PR 10-MAY-2000; 2000GB-00011278.

PA (UNLO) UNIV COLLEGE LONDON.
(EGRI-) EAST GRINSTEAD MEDICAL RES TRUST.

PI Goldspink G, Terenghi G;

PI WPI; 2002-055585/07.

DR N-PSDB; AAS16878.

PT Use of insulin-like growth factor-I (IGF-I) isoform known as mechano
PT growth factor which is encoded by IGF-I exons 4,5,6 and has ability to
PT reduce motoneuron loss in response to nerve avulsion, to treat nerve
PT damage.

PS Claim 11; Fig 6; 65pp; English.

XX The invention relates to the use of an insulin-like growth factor I (IGF-I) isoform, known as mechano-growth factor (MGF), in the manufacture of a medicament for treating nerve damage in the peripheral nervous system, or for treating nerve damage by localising MGF at the site of damage. The CC nerve damage may include severing of a nerve. The treatment may be

CC combined with another treatment (such as a polypeptide growth factor
CC other than MGF) that prevents or diminishes degeneration of the target
CC organ (for example, muscle) which the damaged nerve innervates, whereby
CC the treatment of the muscle with MGF or a polynucleotide encoding MGF
CC prevents or diminishes degeneration. The method is useful for treating
CC neurological disorders, preferably motoneuron disorders. These methods
CC can reduce motoneuron loss by 20% or greater in response to nerve
CC avulsion. This sequence represents the rat MGF polypeptide

Sequence 111 AA;

Query Match 100.0%; Score 599; DB 5; Length 111;
Best Local Similarity 100.0%; Pred. No. 1.1e-51;
Matches 111; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITLGAELVDALQFVCGPRGFYFNKPTVYSSIRAPQTGIYDECCFRSCDLRLMEY 60
DB 1 GPEITLGAELVDALQFVCGPRGFYFNKPTVYSSIRAPQTGIYDECCFRSCDLRLMEY 60

QY 61 CVRCKPTKSARSIRARHTDMPKTKSQPLSTHKKRKLQRRRKGSTLEEHK 111
DB 61 CVRCKPTKSARSIRARHTDMPKTKSQPLSTHKKRKLQRRRKGSTLEEHK 111

RESULT 3

ABR63168
ID ABR63168 standard; protein; 111 AA.

AC ABR63168;

DT 18-DEC-2003 (first entry)

DE Rat mechano growth factor (C-terminal end).

XX Mechano growth factor; MGF; insulin-like growth factor I; rat;
XX splice variant; cardiac; vasotropic; gene therapy.

OS Rattus sp.

PN MO2003066082-A1.

PD 14-AUG-2003.

PF 06-FEB-2003; 2003WO-GB000537.

PR 07-FEB-2002; 2002GB-00002906.

PA (UNLO) UNIV COLLEGE LONDON.
(UNIT) UNIV ILLINOIS FOUND.

PI Goldspink G, Goldspink P;

PI WPI; 2003-636936/60.

DR N-PSDB; ACF79636.

PT Use of Mechano Growth Factor polypeptide or polynucleotide for preventing
PT or limiting apoptosis in the myocardium, particularly for preventing or
PT limiting myocardial damage in response to ischemia or mechanical overload
PT of the heart.

PS Claim 5; Fig 8; 74pp; English.

XX The present sequence is that of the C-terminal end of novel rat mechano
XX growth factor (MGF), encoded by exons 3-6 of the IGF-I gene. MGF is a
XX splice variant and non-liver type isoform of insulin-like growth factor
XX (IGF-I) that is activated in response to cardiac tissue damage and which
XX has a repair function in the ischemic and/or overloaded heart. The rat
XX MGF transcript has a 52 base insert in the B domain that alters the
XX reading frame and hence the C-terminal end of MGF protein in comparison
XX with other IGF-I splice variants. The invention provides use of a MGF
XX polypeptide or polynucleotide in the manufacture of a medicament for the
XX prevention or limitation of myocardial damage in response to ischemia or
XX mechanical overload of the heart by preventing or limiting apoptosis in

APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 212/078
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
LENGTH: 78 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-462-040-47

Query Match 61.3%; Score 367; DB 3; Length 78;
Best Local Similarity 87.0%; Pred. No. 6.9e-35;
Matches 67; Conservative 3; Mismatches 7; Indels 0; Gaps 0;

QY 4 TLGAEIVDALQFVCGPRGFYFNKPTVYGSIRAPQGTIVDECCFRSCDLRLLEMYCVR 63
DB 2 TLGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQGTIVDECCFRSCDLRLLEMYCAP 61
QY 64 CKPKASRSIRAPQHTD 80
DB 62 LRPARSAVSRAQHTD 78

RESULT 15
US-07-953-230A-9
Sequence 9, Application US/07953230A
Patent No. 5476779
GENERAL INFORMATION:
APPLICANT: CHEN, Thomas T
TITLE OF INVENTION: SHAMLOTT, Michael J
TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED
NUMBER OF INVENTIONS: FROM RAINBOW TROUT
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
ADDRESSEE: Burns, Doane, Swecker & Mathis
STREET: George Mason Bldg., Washington & Prince Sts.
CITY: Alexandria
STATE: Virginia
COUNTRY: United States
ZIP: 22113-1404
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
OPERATING SYSTEM: IBM PC compatible
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/953,230A
FILING DATE: 30-SEP-1992
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Crane-Feury, Sharon E
REGISTRATION NUMBER: 36,113
REFERENCE/DOCKET NUMBER: 028755-010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 836-6620
TELEFAX: (703) 836-2021
INFORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
LENGTH: 176 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear

MOLECULE TYPE: protein
US-07-953-230A-9

Query Match 59.9%; Score 359; DB 1; Length 176;
Best Local Similarity 67.3%; Pred. No. 1.5e-33;
Matches 68; Conservative 8; Mismatches 25; Indels 0; Gaps 0;

QY 1 GPETLIGAEIVDALQFVCGPRGFYFNKPTVYGSIRAPQGTIVDECCFRSCDLRLLEMY 60
DB 45 GPETLIGAEIVDTLQFVCGPRGFYFNKPTGYGSSRRSHNRGIVDECCFRSCDLRLLEMY 104
QY 61 CVRCKPYSASRSIRAPQHTDMPYTKSOPLSTHKKKIQRR 101
DB 105 CAPVSKGAARSVRAQHTDMPRTPKVSTAVQSVDRGTER 145

Search completed: March 3, 2004, 08:06:37
Job time: 14.0422 secs

ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FastSeq for Windows 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/167,641C
FILING DATE: December 14, 1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 205/012
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
LENGTH: 78 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-167-641C-47

Query Match 61.3%; Score 367; DB 3; Length 78;
Best Local Similarity 87.0%; Pred. No. 6,9e-35;
Matches 67; Conservative 3; Mismatches 7; Indels 0; Gaps 0;

QY 4 TLGAEVLDAIQVCGPRGFYFNKPTVYSSIRAPQTGIYDECCFRSCDRLRLMYCVR 63
DB 2 TLGAEVLDAIQVCGPRGFYFNKPTVYSSIRAPQTGIYDECCFRSCDRLRLMYCAP 61

QY 64 CKPTKSARSIRARHTD 80
DB 62 LRPARSARSVRARHTD 78

RESULT 13
US-08-460-971A-47
Sequence 47, Application US/08460971A
Patent No. 6150168
GENERAL INFORMATION:
APPLICANT: WOO, SAVIO L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gottchalk, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FastSeq for Windows 2.0
CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/460,971A
FILING DATE: June 5, 1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/167,641
FILING DATE: December 14, 1993
APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 212/063
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
LENGTH: 78 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-460-971A-47

Query Match 61.3%; Score 367; DB 3; Length 78;
Best Local Similarity 87.0%; Pred. No. 6,9e-35;
Matches 67; Conservative 3; Mismatches 7; Indels 0; Gaps 0;

QY 4 TLGAEVLDAIQVCGPRGFYFNKPTVYSSIRAPQTGIYDECCFRSCDRLRLMYCVR 63
DB 2 TLGAEVLDAIQVCGPRGFYFNKPTVYSSIRAPQTGIYDECCFRSCDRLRLMYCAP 61

QY 64 CKPTKSARSIRARHTD 80
DB 62 LRPARSARSVRARHTD 78

RESULT 14
US-08-462-040-47
Sequence 47, Application US/08462040
Patent No. 6177554
GENERAL INFORMATION:
APPLICANT: WOO, SAVIO L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gottchalk, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FastSeq for Windows 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/462,040
FILING DATE: June 5, 1995
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/167,641
FILING DATE: December 14, 1993

Db 146 CAPLPAKSAKRSVRAQHRHTDMPKTX 172

RESULT 10

US-09-528-108-41
Sequence 41, Application US/095528108

Patent No. 6312923

GENERAL INFORMATION:

APPLICANT: Tekamp-Olson, Patricia

TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS

TITLE OF INVENTION: PROTEINS IN YEAST

NUMBER OF SEQUENCES: 41

CORRESPONDENCE ADDRESS:

ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP

STREET: 3605 Glenwood Ave, Suite 310

CITY: Raleigh

STATE: NC

COUNTRY: US

ZIP: 27622

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/528.108

FILING DATE:

CLASSIFICATION:

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/989,251

FILING DATE:

ATTORNEY/AGENT INFORMATION:

NAME: Spull, W. Murray

REGISTRATION NUMBER: 32,943

REFERENCE/DOCKET NUMBER: 5784-4

TELECOMMUNICATION INFORMATION:

TELEPHONE: 919 881 3175

TELEFAX: 919 420 2202

INFORMATION FOR SEQ ID NO: 41:

SEQUENCE CHARACTERISTICS:

LENGTH: 191 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

US-09-528-108-41

Query Match 68.9%; Score 412.5; DB 4; Length 191;
Best local Similarity 89.7%; Pred. No. 1.2e-35;
Matches 78; Conservative 1; Mismatches 7; Indels 1; Gaps 1;

QY 1 GPEITGALVDALQFVCGPRGFYFNKPTVYSSIRRAPQTGIVDECCFRSCDLRLRLEMY 60

DB 86 GPEITGALVDALQFVCGDRGFYFNKPTGIVYSSIRRAPQTGIVDECCFRSCDLRLRLEMY 145

QY 61 CYRCAPTSA-RSIRAPQHRHTDMPKTX 86

DB 146 CAPLPAKSAKRSVRAQHRHTDMPKTX 172

RESULT 11

US-08-460-890A-47

Sequence 47, Application US/08460890A

Patent No. 5994109

GENERAL INFORMATION:

APPLICANT: Woo, Savio L.C.

APPLICANT: Smith, Louis C.

APPLICANT: Cristiano, Richard J.

APPLICANT: Gottchalik, Stephen

TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND

TITLE OF INVENTION: METHODS OF USE

NUMBER OF SEQUENCES: 65

CORRESPONDENCE ADDRESS:

ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street

STREET: Suite 4700

CITY: Los Angeles

STATE: California

COUNTRY: U.S.A.

ZIP: 90071-2066

COMPUTER READABLE FORM:

MEDIUM TYPE: 3.5" Diskette, 1.44 MB

MEDIUM TYPE: storage

COMPUTER: IBM Compatible

OPERATING SYSTEM: IBM P.C. DOS 5.0

SOFTWARE: FastSeq for Windows 2.0

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/460,890A

FILING DATE: June 5, 1995

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/167,641

FILING DATE: December 14, 1993

APPLICATION NUMBER: 07/855,389

FILING DATE: March 20, 1992

APPLICATION NUMBER: PCT/US93/02725

FILING DATE: March 19, 1993

ATTORNEY/AGENT INFORMATION:

NAME: Warburg, Richard J.

REGISTRATION NUMBER: 32,327

REFERENCE/DOCKET NUMBER: 212/066

TELECOMMUNICATION INFORMATION:

TELEPHONE: (213) 489-1600

TELEFAX: (213) 955-0440

INFORMATION FOR SEQ ID NO: 47:

SEQUENCE CHARACTERISTICS:

LENGTH: 78 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: peptide

US-08-460-890A-47

Query Match 61.3%; Score 367; DB 2; Length 78;
Best local Similarity 87.0%; Pred. No. 6.9e-35;
Matches 67; Conservative 3; Mismatches 7; Indels 0; Gaps 0;

QY 4 TLGALVDALQFVCGPRGFYFNKPTVYSSIRRAPQTGIVDECCFRSCDLRLRLEMYCYR 63

DB 2 TLGALVDALQFVCGDRGFYFNKPTGIVYSSIRRAPQTGIVDECCFRSCDLRLRLEMYCAP 61

QY 64 CKPTKARSIRAPQHRHTD 80

DB 62 LRPARSARSVRAQHRHTD 78

RESULT 12

US-08-167-641C-47

Sequence 47, Application US/08167641C

Patent No. 6033884

GENERAL INFORMATION:

APPLICANT: Woo, Savio L.C.

APPLICANT: Smith, Louis C.

APPLICANT: Cristiano, Richard J.

APPLICANT: Gottchalik, Stephen

TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND

TITLE OF INVENTION: METHODS OF USE

NUMBER OF SEQUENCES: 65

CORRESPONDENCE ADDRESS:

ADDRESSEE: Lyon & Lyon

STREET: 633 West Fifth Street

STREET: Suite 4700

CITY: Los Angeles

STATE: California

COUNTRY: U.S.A.

QY 1 GPEITCGALVLDALQFVCGPRGFYFNKPTVYSSIRRAPQGTIVDECCFRSCDLRLRLMY 60
 DB 52 GPEITCGALVLDALQFVCGDRGFYFNKPTGYSSRRAPQGTIVDECCFRSCDLRLRLMY 111
 QY 61 CVRCKPTKSA-RSIRAPQHTDMPKTOK 86
 DB 112 CAPLKPAKSARSVRAPQHTDMPKTOK 137

RESULT 7
 5405942-1
 Patent No. 5405942
 APPLICANT: BELL, GRAEME I.; RALL, LESLIE B.; MERRYWEATHER,
 JAMES P.
 TITLE OF INVENTION: PREPRO INSULIN-LIKE GROWTH FACTORS
 I AND II
 NUMBER OF SEQUENCES: 16
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/07/65,673
 FILING DATE: 16-JUN-1987
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: 630,557
 FILING DATE: 19-JUL-1984
 SEQ ID NO: 1:
 LENGTH: 119
 5405942-1

Query Match 69.4%; Score 416; DB 6; Length 119;
 Best Local Similarity 89.5%; Pred. No. 2.7e-40;
 Matches 77; Conservative 1; Mismatches 8; Indels 0; Gaps 0;

QY 1 GPEITCGALVLDALQFVCGPRGFYFNKPTVYSSIRRAPQGTIVDECCFRSCDLRLRLMY 60
 DB 15 GPEITCGALVLDALQFVCGDRGFYFNKPTGYSSRRAPQGTIVDECCFRSCDLRLRLMY 74
 QY 61 CVRCKPTKSA-RSIRAPQHTDMPKTOK 86
 DB 75 CAPLKPAKSARSVRAPQHTDMPKTOK 100

RESULT 8
 US-08-989-251-41
 Sequence 41, Application US/08989251
 Patent No. 6017731
 GENERAL INFORMATION:
 APPLICANT: Tekamp-Olson, Patricia
 TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
 TITLE OF INVENTION: PROTEINS IN YEAST
 NUMBER OF SEQUENCES: 41
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
 STREET: 3605 Glenwood Ave. Suite 310
 CITY: Raleigh
 STATE: NC
 COUNTRY: US
 ZIP: 27622
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patentin Release #1.0, Version #1.30
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/989,251
 FILING DATE:
 CLASSIFICATION:
 ATTORNEY/AGENT INFORMATION:
 NAME: Spullin, W. Murray
 REGISTRATION NUMBER: 32,943
 REFERENCE/DOCKET NUMBER: 5784-4
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 919 420 2202
 TELEFAX: 919 881 3175

INFORMATION FOR SEQ ID NO: 41:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 191 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 US-08-989-251-41

Query Match 68.9%; Score 412.5; DB 3; Length 191;
 Best Local Similarity 89.7%; Pred. No. 1.2e-39;
 Matches 78; Conservative 1; Mismatches 7; Indels 1; Gaps 1;

QY 1 GPEITCGALVLDALQFVCGPRGFYFNKPTVYSSIRRAPQGTIVDECCFRSCDLRLRLMY 60
 DB 86 GPEITCGALVLDALQFVCGDRGFYFNKPTGYSSRRAPQGTIVDECCFRSCDLRLRLMY 145
 QY 61 CVRCKPTKSA-RSIRAPQHTDMPKTOK 86
 DB 146 CAPLKPAKSARSVRAPQHTDMPKTOK 172

RESULT 9
 US-09-340-250-41
 Sequence 41, Application US/09340250
 Patent No. 6083723
 GENERAL INFORMATION:
 APPLICANT: Tekamp-Olson, Patricia
 TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
 TITLE OF INVENTION: PROTEINS IN YEAST
 NUMBER OF SEQUENCES: 41
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
 STREET: 3605 Glenwood Ave. Suite 310
 CITY: Raleigh
 STATE: NC
 COUNTRY: US
 ZIP: 27622
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patentin Release #1.0, Version #1.30
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/09/340,250
 FILING DATE:
 CLASSIFICATION:
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: 08/989,251
 FILING DATE:
 ATTORNEY/AGENT INFORMATION:
 NAME: Spullin, W. Murray
 REGISTRATION NUMBER: 32,943
 REFERENCE/DOCKET NUMBER: 5784-4
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 919 420 2202
 TELEFAX: 919 881 3175
 INFORMATION FOR SEQ ID NO: 41:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 191 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 US-09-340-250-41

Query Match 68.9%; Score 412.5; DB 3; Length 191;
 Best Local Similarity 89.7%; Pred. No. 1.2e-39;
 Matches 78; Conservative 1; Mismatches 7; Indels 1; Gaps 1;

QY 1 GPEITCGALVLDALQFVCGPRGFYFNKPTVYSSIRRAPQGTIVDECCFRSCDLRLRLMY 60
 DB 86 GPEITCGALVLDALQFVCGDRGFYFNKPTGYSSRRAPQGTIVDECCFRSCDLRLRLMY 145
 QY 61 CVRCKPTKSA-RSIRAPQHTDMPKTOK 86

STREET: One Liberty Place - 46th Floor
CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 MB STORAGE
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/219,878A
FILING DATE: 30-MAR-1994
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/881,524
FILING DATE: 08-MAY-1992
ATTORNEY/AGENT INFORMATION:
NAME: Mark DeLuca
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TUTU-1240
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
TELEFAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 153
TYPE: amino acid
TOPOLOGY: linear
US-08-219-878A-1

Query Match 70.6%; Score 423; DB 1; Length 153;
Best Local Similarity 90.7%; Pred. No. 5,8e-41;
Matches 78; Conservative 1; Mismatches 7; Indels 0; Gaps 0;

QY 1 GPEITLGAELVDALQVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLLEY 60
DB 49 GPEITLGAELVDALQVCGDRGFYFNKPTGYSSSRAPQGTIVDECCFRSCDLRLLEY 108

QY 61 CYRCKPTKSARSIRARHTDMPKTK 86
DB 109 CAPLKPASARSVRAQRTDMPKTK 134

RESULT 5
PCT-US93-04329-1
Sequence 1, Application PC/TUS9304329
GENERAL INFORMATION:
APPLICANT: Bradford A. Jameson and Renato Baserga
TITLE OF INVENTION: IGF-1 Analogs
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: Woodcock Washburn
STREET: One Liberty Place - 46th Floor
CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 MB STORAGE
COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOS
SOFTWARE: WORDPERFECT 5.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/04329
FILING DATE: 19930507
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/881,524
FILING DATE: 08-MAY-92,
ATTORNEY/AGENT INFORMATION:
NAME: Mark DeLuca

REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TUTU-0649
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
TELEFAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 153
TYPE: AMINO ACID
TOPOLOGY: linear
PCT-US93-04329-1

Query Match 70.6%; Score 423; DB 5; Length 153;
Best Local Similarity 90.7%; Pred. No. 5,8e-41;
Matches 78; Conservative 1; Mismatches 7; Indels 0; Gaps 0;

QY 1 GPEITLGAELVDALQVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLLEY 60
DB 49 GPEITLGAELVDALQVCGDRGFYFNKPTGYSSSRAPQGTIVDECCFRSCDLRLLEY 108

QY 61 CYRCKPTKSARSIRARHTDMPKTK 86
DB 109 CAPLKPASARSVRAQRTDMPKTK 134

RESULT 6
US-09-142-583A-11
Sequence 11, Application US/09142583A
Patent No. 6221842
GENERAL INFORMATION:
APPLICANT: GOLDSPIK, GEOFFREY
TITLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: NIXON & VANDERAYE P.C.
STREET: 1100 NORTH GLEBE ROAD
STATE: VA
COUNTRY: USA
ZIP: 22201
COMPUTER READABLE FORM:
MEDIUM TYPE: floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/142,583A
FILING DATE: 29-Oct-1998
CLASSIFICATION: <unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/GB97/00658
FILING DATE: 11-MAR-1997
APPLICATION NUMBER: GB 9605124.8
FILING DATE: 11-MAR-1996
ATTORNEY/AGENT INFORMATION:
NAME: SADOFF, B. J.
REGISTRATION NUMBER: 36663
REFERENCE/DOCKET NUMBER: 117-263
TELECOMMUNICATION INFORMATION:
TELEPHONE: 7038164000
TELEFAX: 7038164100
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 156 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 11:
US-09-142-583A-11

Query Match 70.6%; Score 423; DB 3; Length 156;
Best Local Similarity 90.7%; Pred. No. 5,9e-41;
Matches 78; Conservative 1; Mismatches 7; Indels 0; Gaps 0;

Db 11 GPEITLGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDRLRLMY 70

Qy 61 CVRCKPTKSARSIRARHTDMPKTQKQPLSTHKKRLQRRKSGTLEEHK 111
Db 71 CAPLKPAAKARSVRAQRHTDMPKTQKQPSSTNKQMSQRRRKSGTLEEHK 121

RESULT 2

US-07-953-230A-10
Sequence 10, Application US/07953230A
Patent No. 5476779
GENERAL INFORMATION:
APPLICANT: CHEN, Thomas T
APPLICANT: SHAMLOTT, Michael J
TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED
TITLE OF INVENTION: FROM RAINBOW TROUT
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
ADDRESSEE: Burns, Doane, Swecker & Mathis
STREET: George Mason Bldg., Washington & Prince Sts.
CITY: Alexandria
STATE: Virginia
COUNTRY: United States
ZIP: 22313-1404
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/953,230A
FILING DATE: 30-SEP-1992
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Crane-Peury, Sharon E
REGISTRATION NUMBER: 36,113
REFERENCE/DOCKET NUMBER: 028755-010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 836-6620
TELEFAX: (703) 836-2021
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 137 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
FEATURE:
NAME/KEY: Peptide
LOCATION: 7
OTHER INFORMATION: /note= "Gap of 2 after 7."
FEATURE:
NAME/KEY: Peptide
LOCATION: 31
OTHER INFORMATION: /note= "Gap of 1 after 31."
FEATURE:
NAME/KEY: Peptide
LOCATION: 116
OTHER INFORMATION: /note= "Gap of 27 after 116."
US-07-953-230A-10

Query Match 70.6%; Score 423; DB 1; Length 137;
Best Local Similarity 90.7%; Pred. No. 5.1e-41;
Matches 78; Conservative 1; Mismatches 7; Indels 0; Gaps 0;

Qy 1 GPEITLGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDRLRLMY 60

Db 33 GPEITLGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDRLRLMY 92

Qy 61 CVRCKPTKSARSIRARHTDMPKTQK 86

Db 93 CAPLKPAAKARSVRAQRHTDMPKTQK 118

RESULT 3

US-08-950-720A-9
Sequence 9, Application US/08950720A
Patent No. 6046028
GENERAL INFORMATION:
APPLICANT: Conklin, Darrell C.
APPLICANT: Lofton-Day, Catherine E.
APPLICANT: Lok, Si
APPLICANT: Jaspers, Stephen R.
TITLE OF INVENTION: INSULIN HOMOLOG
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: ZymoGenetics, Inc.
STREET: 1201 Eastlake Avenue East
CITY: Seattle
STATE: WA
COUNTRY: USA
ZIP: 98102
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/950,720A
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION NUMBER:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Sawislak, Deborah A
REGISTRATION NUMBER: 37,438
REFERENCE/DOCKET NUMBER: 96-09
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-442-6672
TELEFAX: 206-442-6678
TELEX:
INFORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
LENGTH: 152 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: No. 6046028e
US-08-950-720A-9

Query Match 70.6%; Score 423; DB 3; Length 152;
Best Local Similarity 90.7%; Pred. No. 5.7e-41;
Matches 78; Conservative 1; Mismatches 7; Indels 0; Gaps 0;

Qy 1 GPEITLGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDRLRLMY 60

Db 23 GPEITLGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDRLRLMY 82

Qy 61 CVRCKPTKSARSIRARHTDMPKTQK 86

Db 83 CAPLKPAAKARSVRAQRHTDMPKTQK 108

RESULT 4

US-08-219-878A-1
Sequence 1, Application US/08219878A
Patent No. 5473054
GENERAL INFORMATION:
APPLICANT: Bradford A. Jameson and Renato Baserga
TITLE OF INVENTION: IGF-1 Analogs
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
ADDRESSEE: Woodcock Washburn
STREET: Kurtz Mackiewicz & No. 5473054r1s

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CM protein - protein search, using sw model

Run on: March 3, 2004, 07:53:43 ; Search time 14.0422 Seconds
(without alignments)
408,091 Million cell updates/sec

Title: US-09-852-261-4
599

Perfect score: 1 GPEITCGALVLDALQFVCGP.....THKKKXQRRKSGTLEBHK 111

Sequence: BLOSUM62

Scoring table: Gapop 10.0 , Gapext 0.5

Searched: 389414 seqs, 51625971 residues

Total number of hits satisfying chosen parameters: 389414

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :

Issued Patents_AA:*
1: /cgn2_6/ptodata/2/1aa/5A.COMB.pep:*
2: /cgn2_6/ptodata/2/1aa/5B.COMB.pep:*
3: /cgn2_6/ptodata/2/1aa/6A.COMB.pep:*
4: /cgn2_6/ptodata/2/1aa/6B.COMB.pep:*
5: /cgn2_6/ptodata/2/1aa/PCTUS.COMB.pep:*
6: /cgn2_6/ptodata/2/1aa/backfltest.pep:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | Query Match | Length | ID | Description |
|------------|-------|-------------|--------|----|-------------------|
| 1 | 512 | 85.5 | 121 | 3 | US-09-142-583A-4 |
| 2 | 423 | 70.6 | 137 | 1 | US-07-953-230A-10 |
| 3 | 423 | 70.6 | 152 | 3 | US-08-950-720A-9 |
| 4 | 423 | 70.6 | 153 | 1 | US-08-219-878A-1 |
| 5 | 423 | 70.6 | 153 | 5 | PCT-US93-04329-1 |
| 6 | 423 | 70.6 | 156 | 3 | US-09-142-583A-11 |
| 7 | 416 | 69.4 | 119 | 6 | 5405942-1 |
| 8 | 412.5 | 68.9 | 191 | 3 | US-08-989-251-41 |
| 9 | 412.5 | 68.9 | 191 | 3 | US-09-340-250-41 |
| 10 | 412.5 | 68.9 | 191 | 4 | US-09-528-108-41 |
| 11 | 367 | 61.3 | 78 | 2 | US-08-460-890A-47 |
| 12 | 367 | 61.3 | 78 | 3 | US-08-167-641C-47 |
| 13 | 367 | 61.3 | 78 | 3 | US-08-460-971A-47 |
| 14 | 367 | 61.3 | 78 | 3 | US-08-462-040-47 |
| 15 | 359 | 59.9 | 176 | 1 | US-07-953-230A-9 |
| 16 | 342 | 57.1 | 953 | 4 | US-09-255-829-14 |
| 17 | 341 | 56.9 | 70 | 1 | US-07-947-035-11 |
| 18 | 341 | 56.9 | 70 | 1 | US-07-776-272-17 |
| 19 | 341 | 56.9 | 70 | 1 | US-07-958-903A-17 |
| 20 | 341 | 56.9 | 70 | 1 | US-08-462-018-17 |
| 21 | 341 | 56.9 | 70 | 1 | US-08-823-245-17 |
| 22 | 341 | 56.9 | 70 | 1 | US-08-482-271-11 |
| 23 | 341 | 56.9 | 70 | 3 | US-09-080-120A-1 |
| 24 | 341 | 56.9 | 70 | 3 | US-08-432-517-11 |
| 25 | 341 | 56.9 | 70 | 4 | US-07-963-329A-1 |
| 26 | 341 | 56.9 | 70 | 4 | US-09-477-924-1 |
| 27 | 341 | 56.9 | 70 | 4 | US-09-723-981-1 |

| | | | | | | |
|----|-----|------|-----|---|-------------------|-------------------|
| 28 | 341 | 56.9 | 70 | 4 | US-09-723-896-1 | Sequence 1, Appl |
| 29 | 341 | 56.9 | 70 | 5 | PCT-US92-0943A-1 | Sequence 1, Appl |
| 30 | 341 | 56.9 | 70 | 5 | PCT-US93-1145B-1 | Sequence 1, Appl |
| 31 | 341 | 56.9 | 70 | 5 | PCT-US95-08925-1 | Sequence 1, Appl |
| 32 | 341 | 56.9 | 94 | 1 | US-07-989-845-28 | Sequence 28, Appl |
| 33 | 341 | 56.9 | 94 | 1 | US-07-989-844-12 | Sequence 12, Appl |
| 34 | 341 | 56.9 | 94 | 1 | US-08-161-044-12 | Sequence 12, Appl |
| 35 | 341 | 56.9 | 94 | 1 | US-08-240-121-12 | Sequence 12, Appl |
| 36 | 341 | 56.9 | 94 | 1 | US-08-451-241-12 | Sequence 12, Appl |
| 37 | 341 | 56.9 | 94 | 5 | PCT-US93-11297-12 | Sequence 12, Appl |
| 38 | 341 | 56.9 | 94 | 5 | PCT-US93-11298-28 | Sequence 28, Appl |
| 39 | 341 | 56.9 | 118 | 3 | US-09-029-267-14 | Sequence 14, Appl |
| 40 | 341 | 56.9 | 155 | 1 | US-08-328-961-8 | Sequence 8, Appl |
| 41 | 341 | 56.9 | 155 | 1 | US-08-462-397-8 | Sequence 8, Appl |
| 42 | 341 | 56.9 | 155 | 3 | US-08-989-251-39 | Sequence 39, Appl |
| 43 | 341 | 56.9 | 155 | 3 | US-09-340-250-39 | Sequence 39, Appl |
| 44 | 341 | 56.9 | 155 | 4 | US-09-528-108-39 | Sequence 39, Appl |
| 45 | 338 | 56.4 | 70 | 1 | US-08-180-572-5 | Sequence 5, Appl |

ALIGNMENTS

RESULT 1
US-09-142-583A-4
Sequence 4, Application US/09142583A
Patent No. 6221842

GENERAL INFORMATION:

APPLICANT: GOLDSPIK, GEOFFREY
TITLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESSES:
ADDRESSEE: NIXON & VANDERHAYE P.C.
STREET: 1100 NORTH GLEBE ROAD
CITY: ARLINGTON
STATE: VA
COUNTRY: USA
ZIP: 22201

COMPUTER READABLE FORM:

MEDIUM TYPE: floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/142,583A
FILING DATE: 29-Oct-1998
CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: NO PCT/GB97/00658
FILING DATE: 11-MAR-1997
APPLICATION NUMBER: GB 9605124.8
FILING DATE: 11-MAR-1996
ATTORNEY/AGENT INFORMATION:
NAME: SADOFF, B. J.
REGISTRATION NUMBER: 36663

REFERENCE/DOCKET NUMBER: 117-263
TELECOMMUNICATION INFORMATION:
TELEPHONE: 7038164000
TELEFAX: 7038164100

INFORMATION FOR SEQ ID NO: 4:

SEQUENCE CHARACTERISTICS:
LENGTH: 121 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 4:
US-09-142-583A-4

Query Match 85.5% Score 512, DB 3; Length 121;
Best Local Similarity 86.5% Pred. No. 2.8e-51;

Matches 96; Conservative 3; Mismatches 12; Indels 0; Gaps 0;
QY 1 GPEITCGALVLDALQFVCGPFGFVFNKFTVYGSSIRRAPOTGIIVDBCCFRSCDLRLKLV 60

US-10-238-114-2

Query Match 69.8%; Score 418; DB 14; Length 153;
Best Local Similarity 89.5%; Pred. No. 2.2e-39;
Matches 77; Conservative 1; Mismatches 8; Indels 0; Gaps 0;

QY 1 GPEITLGAELVDALQFVCGPRGFYFNKPTVYSSIRRAPQTGIVDECCFRSCDLRLRLMY 60
DB 49 GPEITLGAELVDALQFVCGPRGFYFNKPTVYSSIRRAPQTGIVDECCFRSCDLRLRLMY 108
QY 61 CVRCKPTKSA-RSIRARHTDMPKTK 86
DB 109 CAPLKPASAKRSVRAQRHTDMPKTK 134

RESULT 15

US-09-921-398-41
; Sequence 41, Application US/09921398
; Patent No. US20020055169A1
; GENERAL INFORMATION:
; APPLICANT: Tekamp-Olson, Patricia
; TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
; PROTEINS IN YEAST
; NUMBER OF SEQUENCES: 41
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
; STREET: 3605 Glenwood Ave, Suite 310
; CITY: Raleigh
; STATE: NC
; COUNTRY: US
; ZIP: 27622
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/921,398
; FILING DATE: 02-Aug-2001
; CLASSIFICATION: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: Sprull, W. Murray
; REGISTRATION NUMBER: 32,943
; REFERENCE/DOCKET NUMBER: 5784-4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919 420 2202
; TELEFAX: 919 881 3175
; INFORMATION FOR SEQ ID NO: 41:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 191 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 41:
US-09-921-398-41

Query Match 68.9%; Score 412.5; DB 9; Length 191;
Best Local Similarity 89.7%; Pred. No. 1.2e-38;
Matches 78; Conservative 1; Mismatches 7; Indels 1; Gaps 1;

QY 1 GPEITLGAELVDALQFVCGPRGFYFNKPTVYSSIRRAPQTGIVDECCFRSCDLRLRLMY 60
DB 86 GPEITLGAELVDALQFVCGPRGFYFNKPTVYSSIRRAPQTGIVDECCFRSCDLRLRLMY 145
QY 61 CVRCKPTKSA-RSIRARHTDMPKTK 86
DB 146 CAPLKPASAKRSVRAQRHTDMPKTK 172

Search completed: March 3, 2004, 08:14:23
Job time: 151.455 secs

PRIOR APPLICATION NUMBER: US 60/329,650
PRIOR FILING DATE: 2001-10-16
NUMBER OF SEQ ID NOS: 4
SOFTWARE: Patentin version 3.0
SEQ ID NO 3
LENGTH: 153
TYPE: PRT
ORGANISM: Homo sapiens
US-10-136-639-3

Query Match 70.6%; Score 423; DB 14; Length 153;
Best Local Similarity 90.7%; Pred. No. 6.1e-40;
Matches 76; Conservative 1; Mismatches 7; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLLEY 60
DB 49 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLLEY 108
CY 61 CVRCKPTKSARSIRARHTDMPKTX 86
DB 109 CAPLKPASARSARVRAQRHTDMPKTX 134

RESULT 11
US-10-207-655-55
Sequence 55, Application US/10207655
Publication No. US20030118592A1
GENERAL INFORMATION:
APPLICANT: Ledbetter, Jeffrey A.
APPLICANT: Hayden-Ledbetter, Martha S.
TITLE OF INVENTION: BINDING DOMAIN-IMMUNOGLOBULIN FUSION PROTEINS
FILE REFERENCE: 390069.401C1
CURRENT APPLICATION NUMBER: US/10/207,655
CURRENT FILING DATE: 2002-07-25
NUMBER OF SEQ ID NOS: 426
SOFTWARE: Patentin version 3.0
SEQ ID NO 55
LENGTH: 153
TYPE: PRT
ORGANISM: Homo sapiens
US-10-207-655-55

Query Match 70.6%; Score 423; DB 14; Length 153;
Best Local Similarity 90.7%; Pred. No. 6.1e-40;
Matches 76; Conservative 1; Mismatches 7; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLLEY 60
DB 49 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLLEY 108
CY 61 CVRCKPTKSARSIRARHTDMPKTX 86
DB 109 CAPLKPASARSARVRAQRHTDMPKTX 134

RESULT 12
US-09-852-261-14
Sequence 14, Application US/09852261
Patent No. US20020083477A1
GENERAL INFORMATION:
APPLICANT: GOLDSPIK, GEOFFREY
APPLICANT: TERENGT, GIORGIO
TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
FILE REFERENCE: 117-351
CURRENT APPLICATION NUMBER: US/09/852,261
CURRENT FILING DATE: 2001-05-10
PRIOR APPLICATION NUMBER: GB 0011278.9
PRIOR FILING DATE: 2000-05-10
NUMBER OF SEQ ID NOS: 14
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 14
LENGTH: 105
TYPE: PRT

ORGANISM: Oryctolagus cuniculus
US-09-852-261-14

Query Match 70.1%; Score 420; DB 9; Length 105;
Best Local Similarity 89.5%; Pred. No. 8.7e-40;
Matches 77; Conservative 2; Mismatches 7; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLLEY 60
DB 1 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLLEY 60
CY 61 CVRCKPTKSARSIRARHTDMPKTX 86
DB 61 CAPLKPASARSARVRAQRHTDMPKTX 86

RESULT 13
US-10-238-114-3
Sequence 3, Application US/10238114
Publication No. US20030100073A1
GENERAL INFORMATION:
APPLICANT: Meriel
APPLICANT: ANDREONI, Christine Michele
TITLE OF INVENTION: IGF-1 AS FELINE VACCINE ADJUVANT, IN PARTICULAR AGAINST FELINE
FILE REFERENCE: 454313-3165.1
CURRENT APPLICATION NUMBER: US/10/238,114
CURRENT FILING DATE: 2002-09-10
PRIOR APPLICATION NUMBER: FR 01 11736
PRIOR FILING DATE: 2001-09-11
PRIOR APPLICATION NUMBER: US 60/318,666
PRIOR FILING DATE: 2001-09-12
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.1
SEQ ID NO 3
LENGTH: 105
TYPE: PRT
ORGANISM: Felis catus
US-10-238-114-3

Query Match 69.8%; Score 418; DB 14; Length 105;
Best Local Similarity 89.5%; Pred. No. 1.5e-39;
Matches 77; Conservative 1; Mismatches 8; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLLEY 60
DB 1 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLLEY 60
CY 61 CVRCKPTKSARSIRARHTDMPKTX 86
DB 61 CAPLKPASARSARVRAQRHTDMPKTX 86

RESULT 14
US-10-238-114-2
Sequence 2, Application US/10238114
Publication No. US20030100073A1
GENERAL INFORMATION:
APPLICANT: Meriel
APPLICANT: ANDREONI, Christine Michele
TITLE OF INVENTION: IGF-1 AS FELINE VACCINE ADJUVANT, IN PARTICULAR AGAINST FELINE
FILE REFERENCE: 454313-3165.1
CURRENT APPLICATION NUMBER: US/10/238,114
CURRENT FILING DATE: 2002-09-10
PRIOR APPLICATION NUMBER: FR 01 11736
PRIOR FILING DATE: 2001-09-11
PRIOR APPLICATION NUMBER: US 60/318,666
PRIOR FILING DATE: 2001-09-12
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.1
SEQ ID NO 2
LENGTH: 153
TYPE: PRT
ORGANISM: Felis catus

;; TITLE OF INVENTION: NEUTRALIZING HUMAN ANTI-IGFR ANTIBODY
;; FILE REFERENCE: OC0153-K-US
;; CURRENT APPLICATION NUMBER: US/10/443,466A
;; CURRENT FILING DATE: 2003-05-22
;; PRIOR APPLICATION NUMBER: 60/383,459
;; PRIOR FILING DATE: 2002-05-24
;; PRIOR APPLICATION NUMBER: 60/393,214
;; PRIOR FILING DATE: 2002-07-02
;; PRIOR APPLICATION NUMBER: 60/436,254
;; PRIOR FILING DATE: 2002-12-23
;; NUMBER OF SEQ ID NOS: 120
;; SOFTWARE: PatentIn version 3.1
;; SEQ ID NO 20
;; LENGTH: 195
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-10-443-466A-20

Query Match 77.5%; Score 464; DB 15; Length 195;
Best Local Similarity 85.3%; Pred. No. 1,9e-44;
Matches 87; Conservative 3; Mismatches 12; Indels 0; Gaps 0;

Qy 1 GPEITCGAELVDALQVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLRLMY 60
Db 49 GPEITCGAELVDALQVCGDRGFYFNKPTGYSSSRAPQGTIVDECCFRSCDLRLRLMY 108
Qy 61 CVRCKPTKSARSIRAPQRTDMPKTXK 102
Db 109 CAPLKPASARSVRAQRTDMPKTXKQPSSTNKTKYSQRK 150

RESULT 7
US-09-852-261-10
; Sequence 10, Application US/09852261
; Patent No. US20020083477A1
; GENERAL INFORMATION:
; APPLICANT: GOLDSPIK, GEOFFREY
; APPLICANT: TERENCE, GIORGIO
; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
; FILE REFERENCE: 117-351
; CURRENT APPLICATION NUMBER: US/09/852,261
; CURRENT FILING DATE: 2001-05-10
; PRIOR APPLICATION NUMBER: GB 0011278.9
; PRIOR FILING DATE: 2000-05-10
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 10
; LENGTH: 105
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-852-261-10

Query Match 70.6%; Score 423; DB 9; Length 105;
Best Local Similarity 90.7%; Pred. No. 4e-40; Indels 0; Gaps 0;
Matches 78; Conservative 1; Mismatches 7; Indels 0;

Qy 1 GPEITCGAELVDALQVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLRLMY 60
Db 1 GPEITCGAELVDALQVCGDRGFYFNKPTGYSSSRAPQGTIVDECCFRSCDLRLRLMY 60
Qy 61 CVRCKPTKSARSIRAPQRTDMPKTXK 86
Db 61 CAPLKPASARSVRAQRTDMPKTXK 86

RESULT 8
US-10-251-661-8
; Sequence 8, Application US/10251661
; Publication No. US20030168555A1
; GENERAL INFORMATION:
; APPLICANT: Albertini, Cristina M.
; APPLICANT: Bear, Mark F.
; TITLE OF INVENTION: Methods and Compositions for Regulating

;; TITLE OF INVENTION: Memory Consolidation
;; FILE REFERENCE: 3499.1001-003
;; CURRENT APPLICATION NUMBER: US/10/251,661
;; CURRENT FILING DATE: 2002-09-20
;; PRIOR APPLICATION NUMBER: 60/193,614
;; PRIOR FILING DATE: 2000-03-31
;; PRIOR APPLICATION NUMBER: PCT/US01/10661
;; PRIOR FILING DATE: 2001-04-02
;; NUMBER OF SEQ ID NOS: 12
;; SOFTWARE: FastSeq for Windows Version 4.0
;; SEQ ID NO 8
;; LENGTH: 137
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-10-251-661-8

Query Match 70.6%; Score 423; DB 14; Length 137;
Best Local Similarity 90.7%; Pred. No. 5.4e-40;
Matches 78; Conservative 1; Mismatches 7; Indels 0; Gaps 0;

Qy 1 GPEITCGAELVDALQVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLRLMY 60
Db 33 GPEITCGAELVDALQVCGDRGFYFNKPTGYSSSRAPQGTIVDECCFRSCDLRLRLMY 92
Qy 61 CVRCKPTKSARSIRAPQRTDMPKTXK 86
Db 93 CAPLKPASARSVRAQRTDMPKTXK 118

RESULT 9
US-09-919-497-74
; Sequence 74, Application US/09919497
; Patent No. US2002010662A1
; GENERAL INFORMATION:
; APPLICANT: Mutter, George L.
; TITLE OF INVENTION: PROGNOSTIC CLASSIFICATION OF ENDOMETRIAL CANCER
; FILE REFERENCE: B0801/725
; CURRENT APPLICATION NUMBER: US/09/919,497
; CURRENT FILING DATE: 2001-07-31
; PRIOR APPLICATION NUMBER: US 60/221,735
; PRIOR FILING DATE: 2000-07-31
; NUMBER OF SEQ ID NOS: 100
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 74
; LENGTH: 153
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-919-497-74

Query Match 70.6%; Score 423; DB 9; Length 153;
Best Local Similarity 90.7%; Pred. No. 6.1e-40; Indels 0; Gaps 0;
Matches 78; Conservative 1; Mismatches 7; Indels 0;

Qy 1 GPEITCGAELVDALQVCGPRGFYFNKPTVYSSIRAPQGTIVDECCFRSCDLRLRLMY 60
Db 49 GPEITCGAELVDALQVCGDRGFYFNKPTGYSSSRAPQGTIVDECCFRSCDLRLRLMY 108
Qy 61 CVRCKPTKSARSIRAPQRTDMPKTXK 86
Db 109 CAPLKPASARSVRAQRTDMPKTXK 134

RESULT 10
US-10-136-639-3
; Sequence 3, Application US/10136639
; Publication No. US20030072761A1
; GENERAL INFORMATION:
; APPLICANT: Lebowitz, Jonathan
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TARGETING PROTEINS ACROSS THE BLOOD
; FILE REFERENCE: SYM-008
; CURRENT APPLICATION NUMBER: US/10/136,639
; CURRENT FILING DATE: 2002-09-06

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GENERAL INFORMATION:
APPLICANT: Parrow, Vendela
APPLICANT: Rosenberg, Linda
TITLE OF INVENTION: NEW METHODS
FILE REFERENCE: 13425-111001
CURRENT APPLICATION NUMBER: US/10/161,088
CURRENT FILING DATE: 2002-05-31
PRIOR APPLICATION NUMBER: SE 0101934-8
PRIOR FILING DATE: 2001-06-01
NUMBER OF SEQ ID NOS: 3
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 2
LENGTH: 133
TYPE: PRT
ORGANISM: Homo sapiens
US-10-161-088-2

Query Match      89.6%; Score 537; DB 14; Length 133;
Best Local Similarity 91.0%; Pred. No. 6,8e-53;
Matches 101; Conservative 2; Mismatches 8; Indels 0; Gaps 0;

Cy 1 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRAPOTGIYDECCFRSCDLRLRLEMY 60
Db 23 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRAPOTGIYDECCFRSCDLRLRLEMY 82

Cy 61 CVRCKPTKSARSIRARHTDMPKTKSQPLSTHKRKLQRRRKGSTLEEHK 111
Db 83 CAPLKPAAARSVRAQRHTDMPKTKSQPLSTHKRKLQRRRKGSTLEEHK 133

RESULT 3
US-09-852-261-6
Sequence 6, Application US/09852261
Patent No. US20020083477A1
GENERAL INFORMATION:
APPLICANT: GOLDSPIRK, GEOFFREY
APPLICANT: TERENGHI, GIORGIO
TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
FILE REFERENCE: 117-351
CURRENT APPLICATION NUMBER: US/09/852,261
CURRENT FILING DATE: 2001-05-10
PRIOR APPLICATION NUMBER: GB 0011278.9
PRIOR FILING DATE: 2000-05-10
NUMBER OF SEQ ID NOS: 14
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 6
LENGTH: 111
TYPE: PRT
ORGANISM: Oryctolagus cuniculus
US-09-852-261-6

Query Match      85.5%; Score 512; DB 9; Length 111;
Best Local Similarity 86.5%; Pred. No. 3,7e-50;
Matches 96; Conservative 3; Mismatches 12; Indels 0; Gaps 0;

Cy 1 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRAPOTGIYDECCFRSCDLRLRLEMY 60
Db 1 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRAPOTGIYDECCFRSCDLRLRLEMY 60

Cy 61 CVRCKPTKSARSIRARHTDMPKTKSQPLSTHKRKLQRRRKGSTLEEHK 111
Db 61 CAPLKPAAARSVRAQRHTDMPKTKSQPLSTHKRKLQRRRKGSTLEEHK 111

RESULT 4
US-09-852-261-2
Sequence 2, Application US/09852261
Patent No. US20020083477A1
GENERAL INFORMATION:
APPLICANT: GOLDSPIRK, GEOFFREY
APPLICANT: TERENGHI, GIORGIO
TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
FILE REFERENCE: 117-351
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CURRENT APPLICATION NUMBER: US/09/852,261
CURRENT FILING DATE: 2001-05-10
PRIOR APPLICATION NUMBER: GB 0011278.9
PRIOR FILING DATE: 2000-05-10
NUMBER OF SEQ ID NOS: 14
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 2
LENGTH: 110
TYPE: PRT
ORGANISM: Homo sapiens
US-09-852-261-2

Query Match      82.6%; Score 494.5; DB 9; Length 110;
Best Local Similarity 85.6%; Pred. No. 3,5e-48;
Matches 95; Conservative 2; Mismatches 13; Indels 1; Gaps 1;

Cy 1 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRAPOTGIYDECCFRSCDLRLRLEMY 60
Db 1 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRAPOTGIYDECCFRSCDLRLRLEMY 60

Cy 61 CVRCKPTKSARSIRARHTDMPKTKSQPLSTHKRKLQRRRKGSTLEEHK 111
Db 61 CAPLKPAAARSVRAQRHTDMPKTKSQPLSTHKRKLQRRRKGSTLEEHK 110

RESULT 5
US-09-852-261-12
Sequence 12, Application US/09852261
Patent No. US20020083477A1
GENERAL INFORMATION:
APPLICANT: GOLDSPIRK, GEOFFREY
APPLICANT: TERENGHI, GIORGIO
TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
FILE REFERENCE: 117-351
CURRENT APPLICATION NUMBER: US/09/852,261
CURRENT FILING DATE: 2001-05-10
PRIOR APPLICATION NUMBER: GB 0011278.9
PRIOR FILING DATE: 2000-05-10
NUMBER OF SEQ ID NOS: 14
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 12
LENGTH: 105
TYPE: PRT
ORGANISM: Rattus sp.
US-09-852-261-12

Query Match      78.6%; Score 471; DB 9; Length 105;
Best Local Similarity 100.0%; Pred. No. 1,5e-45;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy 1 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRAPOTGIYDECCFRSCDLRLRLEMY 60
Db 1 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRAPOTGIYDECCFRSCDLRLRLEMY 60

Cy 61 CVRCKPTKSARSIRARHTDMPKTKSQPLSTHKRKLQRRRKGSTLEEHK 111
Db 61 CVRCKPTKSARSIRARHTDMPKTKSQPLSTHKRKLQRRRKGSTLEEHK 111

RESULT 6
US-10-443-466A-20
Sequence 20, Application US/10443466A
Patent No. US20040018191A1
GENERAL INFORMATION:
APPLICANT: Wang, Yan
APPLICANT: Pachter, Jonathan A
APPLICANT: Hailey, Judith
APPLICANT: Greenberg, Robert
APPLICANT: Leonard, Presta
APPLICANT: Brams, Peter
APPLICANT: Feingersh, Diane
APPLICANT: Williams, Denise
APPLICANT: Srinivasan, Mohan
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OM protein - protein search, using sw model

Run on: March 3, 2004, 07:55:33 ; Search time 151.455 Seconds
(without alignments)
154.752 Million cell updates/sec

Title: US-09-852-261-4

Perfect score: 599

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Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

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10: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep.*
11: /cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep.*
12: /cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep.*
13: /cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep.*
14: /cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep.*
15: /cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep.*
16: /cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep.*
17: /cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep.*
18: /cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | Query Match | Length | ID | Description |
|------------|-------|-------------|--------|----|-------------------|
| 1 | 599 | 100.0 | 111 | 9 | US-09-852-261-4 |
| 2 | 537 | 89.6 | 133 | 14 | US-10-161-088-2 |
| 3 | 512 | 85.5 | 111 | 9 | US-09-852-261-6 |
| 4 | 494.5 | 82.6 | 110 | 9 | US-09-852-261-2 |
| 5 | 471 | 78.6 | 105 | 9 | US-09-852-261-12 |
| 6 | 464 | 77.5 | 195 | 15 | US-10-443-466A-20 |
| 7 | 423 | 70.6 | 105 | 9 | US-09-852-261-10 |
| 8 | 423 | 70.6 | 137 | 14 | US-10-251-661-8 |
| 9 | 423 | 70.6 | 153 | 9 | US-09-919-497-74 |
| 10 | 423 | 70.6 | 153 | 14 | US-10-136-639-3 |
| 11 | 423 | 70.6 | 153 | 14 | US-10-207-655-5 |
| 12 | 420 | 70.1 | 105 | 9 | US-09-852-261-14 |
| 13 | 418 | 69.8 | 105 | 14 | US-10-238-114-3 |
| 14 | 418 | 69.8 | 153 | 14 | US-10-238-114-2 |
| 15 | 412.5 | 68.9 | 191 | 9 | US-09-921-398-41 |

| | | | | | | |
|----|-------|------|-----|----|-------------------|--------------------|
| 16 | 412.5 | 68.9 | 191 | 14 | US-10-280-826-41 | Sequence 41, Appl |
| 17 | 342 | 57.1 | 953 | 14 | US-10-241-596-14 | Sequence 14, Appl |
| 18 | 341 | 56.9 | 70 | 9 | US-09-848-664-29 | Sequence 29, Appl |
| 19 | 341 | 56.9 | 70 | 9 | US-09-848-664-30 | Sequence 30, Appl |
| 20 | 341 | 56.9 | 70 | 9 | US-09-903-327A-8 | Sequence 8, Appl |
| 21 | 341 | 56.9 | 70 | 10 | US-09-858-935B-3 | Sequence 3, Appl |
| 22 | 341 | 56.9 | 70 | 13 | US-10-028-410-1 | Sequence 1, Appl |
| 23 | 341 | 56.9 | 70 | 13 | US-10-066-009A-1 | Sequence 1, Appl |
| 24 | 341 | 56.9 | 70 | 14 | US-10-136-639-1 | Sequence 1, Appl |
| 25 | 341 | 56.9 | 70 | 14 | US-10-136-841-7 | Sequence 7, Appl |
| 26 | 341 | 56.9 | 70 | 14 | US-10-444-326-1 | Sequence 1, Appl |
| 27 | 341 | 56.9 | 70 | 15 | US-10-272-533A-7 | Sequence 7, Appl |
| 28 | 341 | 56.9 | 70 | 15 | US-10-272-483A-7 | Sequence 7, Appl |
| 29 | 341 | 56.9 | 70 | 16 | US-10-444-262-1 | Sequence 1, Appl |
| 30 | 341 | 56.9 | 118 | 14 | US-10-179-046-14 | Sequence 14, Appl |
| 31 | 341 | 56.9 | 155 | 9 | US-09-921-398-39 | Sequence 39, Appl |
| 32 | 341 | 56.9 | 155 | 14 | US-10-280-826-39 | Sequence 39, Appl |
| 33 | 341 | 56.9 | 510 | 9 | US-09-903-327A-12 | Sequence 12, Appl |
| 34 | 334 | 55.8 | 91 | 14 | US-10-323-046-42 | Sequence 42, Appl |
| 35 | 287 | 47.9 | 68 | 14 | US-10-339-740-218 | Sequence 218, Appl |
| 36 | 269 | 44.9 | 56 | 13 | US-10-066-009A-5 | Sequence 5, Appl |
| 37 | 223 | 37.2 | 180 | 14 | US-10-207-655-57 | Sequence 57, Appl |
| 38 | 221 | 36.9 | 156 | 9 | US-09-972-809-7 | Sequence 7, Appl |
| 39 | 221 | 36.9 | 180 | 14 | US-10-081-119-38 | Sequence 38, Appl |
| 40 | 221 | 36.9 | 180 | 14 | US-10-136-841-2 | Sequence 2, Appl |
| 41 | 221 | 36.9 | 180 | 14 | US-10-097-340-145 | Sequence 145, App |
| 42 | 221 | 36.9 | 180 | 15 | US-10-295-027-199 | Sequence 199, App |
| 43 | 221 | 36.9 | 180 | 15 | US-10-272-533A-2 | Sequence 2, Appl |
| 44 | 221 | 36.9 | 180 | 15 | US-10-173-999-95 | Sequence 99, Appl |
| 45 | 221 | 36.9 | 180 | 15 | US-10-272-483A-2 | Sequence 2, Appl |

ALIGNMENTS

RESULT 1
US-09-852-261-4
; Sequence 4, Application US/09852261
; Patent No. US20020083477A1
; GENERAL INFORMATION:
; APPLICANT: GOLDSPINK, GEOFFREY
; APPLICANT: TERENCE, GIORGIO
; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
; FILE REFERENCE: 117-351
; CURRENT APPLICATION NUMBER: US/09/852,261
; CURRENT FILING DATE: 2001-05-10
; PRIOR APPLICATION NUMBER: GB 0011278.9
; PRIOR FILING DATE: 2000-05-10
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: Patentm Ver. 2.1
; SEQ ID NO 4
; LENGTH: 111
; TYPE: PRT
; ORGANISM: Rattus sp.
US-09-852-261-4

Query Match 100.0%; Score 599; DB 9; Length 111;
Best Local Similarity 100.0%; Pred. No. 5.4e-60;
Matches 111; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITLCAELVDALQFVCGPFGYFNKPTVYGSIRAPOTGIYDECCFSCDLRLREMY 60
DB 1 GPEITLCAELVDALQFVCGPFGYFNKPTVYGSIRAPOTGIYDECCFSCDLRLREMY 60
QY 61 CVRCKPTKARSIRAPQHTDMPKTSQPISTKKRLQRRRKGSTLEHK 111
DB 61 CVRCKPTKARSIRAPQHTDMPKTSQPISTKKRLQRRRKGSTLEHK 111
RESULT 2
US-10-161-088-2
; Sequence 2, Application US/10161088
; Publication No. US2003007761A1

Biochem. J. 251, 95-103, 1988
A:Title: Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences and biologic
A:Reference number: S00465; PMID:88268820; PMID:3390164
A:Accession: S00465
A:Molecule type: protein
A:Residues: 49-118 <FRA>
A:Experimental source: colostrum
A:Note: a form of IGF-I lacking the first three residues and possessing enhanced biological
A:Superfamily: insulin
C:Keywords: alternative splicing; colostrum; growth factor; plasma
F:1-20/Domain: signal sequence (fragment) #status predicted <PRO>
F:22-48/Domain: propeptide #status predicted <PRO>
F:49-118/Domain: insulin-like growth factor IA (active) #status experimental <MAT>
F:78-89/Domain: insulin B chain-like #status experimental <DOB>
F:90-110/Domain: insulin A chain-like #status experimental <DOB>
F:111-113/Domain: D peptide #status experimental <DOB>
F:119-153/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CPR>
F:154-96,66-109,95-100/Dissulfide bonds: #status predicted

Query Match 69.8%; Score 418; DB 1; Length 153;
Best Local Similarity 89.5%; Pred. No. 3, 5e-35;
Matches 77; Conservative 1; Mismatches 8; Indels 0; Gaps 0;

Qy 1 GPEITCGAEIVDALQVCGPRGFYFNKPTVYSSIRAPDTGIVDECCFRSCDRLRLMY 60
Db 49 GPEITCGAEIVDALQVCGPRGFYFNKPTVYSSIRAPDTGIVDECCFRSCDRLRLMY 108
Qy 61 CVRCKPTKSARSIRAGHTDMPKTK 86
Db 109 CAPLKPAAKSARSYVAGHTDMPKAK 134

RESULT 14

S12825
Insulin-like growth factor I precursor - pig

N:Alternate names: somatomedin C

C:Species: Sus scrofa domestica (domestic pig)

C:Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 16-Jul-1999

C:Accession: S12825; S21488; A34938; A60738

R:McLester, M.; Brem, G.

Nucleic Acids Res. 18, 364, 1990

A:Title: Nucleotide sequence of porcine insulin-like growth factor I: 5' untranslated re

A:Reference number: S12825; PMID:90221822; PMID:2326169

A:Accession: S12825

A:Status: preliminary

A:Molecule type: DNA

A:Residues: 1-153 <DOB>

A:Cross-references: EMBL:X52388

R:Dickson, M.C.; Huskisson, N.S.; Gilmour, R.S.

submitted to the EMBL Data Library, November 1989

A:Description: Porcine insulin-like growth factor gene: sequence of exon and 5' non-cod

A:Reference number: S21488

A:Accession: S21488

A:Molecule type: DNA

A:Residues: 1-21 <DIC>

A:Cross-references: EMBL:X17638; NID:91995; PIDN:CAA5632.1; FID:91996

R:Tavakkoli, A.; Simmen, F.A.; Simmen, R.C.M.

Mol. Endocrinol. 2, 674-681, 1988

A:Title: Porcine insulin-like growth factor-I (pIGF-I): complementary deoxyribonucleic ac

A:Reference number: A34938; PMID:89096956; PMID:3211153

A:Accession: A34938

A:Molecule type: mRNA

A:Residues: 1-21-153 <TAV>

A:Cross-references: GB:M31175

R:Francis, G.L.; Owens, P.C.; McNeill, K.A.; Wallace, J.C.; Ballard, F.J.

J. Endocrinol. 122, 681-687, 1989

A:Title: Purification, amino acid sequences and assay cross-reactivities of porcine insu

A:Reference number: A60738; PMID:30039035; PMID:2809477

A:Accession: A60738

A:Molecule type: protein

A:Residues: 49-117, 'X' <FRA>

C:Genetics:
A:Insertions: 21/3; 74/1
C:Superfamily: insulin
C:Keywords: growth factor
F:1-22/Domain: signal sequence #status predicted <SIG>
F:23-48/Domain: propeptide #status predicted <PRO>
F:49-153/Domain: insulin-like growth factor IA #status experimental <MAT>

Query Match 69.8%; Score 418; DB 2; Length 153;
Best Local Similarity 89.5%; Pred. No. 3, 5e-35;
Matches 77; Conservative 1; Mismatches 8; Indels 0; Gaps 0;

Qy 1 GPEITCGAEIVDALQVCGPRGFYFNKPTVYSSIRAPDTGIVDECCFRSCDRLRLMY 60
Db 49 GPEITCGAEIVDALQVCGPRGFYFNKPTVYSSIRAPDTGIVDECCFRSCDRLRLMY 108
Qy 61 CVRCKPTKSARSIRAGHTDMPKTK 86
Db 109 CAPLKPAAKSARSYVAGHTDMPKAK 134

RESULT 15

S22878
Insulin-like growth factor I precursor, splice form 2 - sheep

C:Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)

C:Date: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 23-Jul-1999

C:Accession: S22878; S07198

R:Dickson, M.C.; Saunders, J.C.; Gilmour, R.S.

J. Mol. Endocrinol. 6, 17-31, 1991

A:Title: The ovine insulin-like growth factor-I gene: characterization, expression and

A:Reference number: S22877; PMID:91197361; PMID:2015053

A:Accession: S22878

A:Status: preliminary

A:Molecule type: DNA

A:Residues: 1-138 <DIC>

A:Cross-references: EMBL:X51358

R:Francis, G.L.; McNeill, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.

Endocrinology 124, 1173-1183, 1989

A:Title: Sheep insulin-like growth factors I and II: sequences, activities and assays.

A:Reference number: S07198; PMID:89136887; PMID:2537174

A:Accession: S07198

A:Molecule type: protein

A:Residues: 34-103 <FRA>

A:Experimental source: fetal plasma

C:Genetics:

A:Insertions: 5/3; 59/1; 219/3

C:Superfamily: insulin

C:Keywords: alternative splicing; growth factor; plasma

F:7-33/Domain: propeptide #status predicted <PRO>

F:34-103/Domain: insulin-like growth factor I (active) #status experimental <MAT>

F:163-74/Domain: insulin chain B-like #status predicted <DOB>

F:175-95/Domain: insulin connecting peptide-like #status predicted <DOB>

F:196-103/Domain: insulin chain A-like #status predicted <DOB>

F:196-103/Domain: insulin chain A-like #status predicted <DOB>

F:196-103/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>

F:196-103/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>

F:196-103/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>

Query Match 68.4%; Score 410; DB 2; Length 138;
Best Local Similarity 88.4%; Pred. No. 2, 1e-34;
Matches 76; Conservative 1; Mismatches 9; Indels 0; Gaps 0;

Qy 1 GPEITCGAEIVDALQVCGPRGFYFNKPTVYSSIRAPDTGIVDECCFRSCDRLRLMY 60
Db 34 GPEITCGAEIVDALQVCGPRGFYFNKPTVYSSIRAPDTGIVDECCFRSCDRLRLMY 93
Qy 61 CVRCKPTKSARSIRAGHTDMPKTK 86
Db 94 CAPLKPAAKSARSYVAGHTDMPKAK 119

Search completed: March 3, 2004, 07:56:14
Job time: 11.7018 secs

A:Molecule type: mRNA
A:Residues: 1-153 <NOR>
A:Cross-references: EMBL:X56773; NID:932989; PIDN:CAA0092.1; PID:932990
R:Sandberg-Nordqvist, A.C.; Stahlboom, F.A.; Reincke, M.; Collins, V.P.; von Holst, H.;
Cancer Res. 53; 2475-2478, 1993
A:Title: Characterization of insulin-like growth factor 1 in human primary brain tumors.
A:Reference number: A48960; MUID:93265440; PMID:8495408
A:Accession: A48960
A:Molecule type: mRNA
A:Residues: 1-123, 'E', 125-132, 'E', 134-153 <SAN>
A:Cross-references: GB:X56773; GB:S61841; NID:932989
A:Experimental source: anaplastic oligodendroglioma
A:Note: Sequence extracted from NCBI backbone (NCBIN:133056, NCBI:P.133057)
A:Note: Sequence inconsistent with the nucleotide translation
R:Rall, L.B.; Scott, J.; Bell, G.I.
Meth. Enzymol. 146; 239-248, 1987
A:Title: Human insulin-like growth factor I and II messenger RNA: isolation of complemen
A:Reference number: 157044; MUID:88065102; PMID:3683205
A:Accession: 157044
A:Molecule type: mRNA
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Residues: 24-153 <PAL>
A:Cross-references: GB:M29644; NID:9183119; PIDN:AA52543.1; PID:9183120
A:Comment: The insulin-like growth factors, isolated from plasma, are structurally and E
C:Comment: For an alternative splice form, see PIR:IGHU1B.
C:Genetics:
A:Gene: GDB:IGF1
A:Cross-references: GDB:120081; OMIM:147440
A:Map position: 12q22-12q24.1
A:Introns: 21/3; 74/1; 134/3
C:Superfamily: Insulin
C:Keywords: alternative splicing; growth factor; plasma
F:1-21/Domain: signal sequence #status predicted <SIG>
F:22-48/Domain: propeptide #status predicted <PRO>
F:49-118/Product: insulin-like growth factor I #status experimental <CHB>
F:49-77/Domain: insulin chain B-like #status experimental <CHB>
F:78-89/Domain: insulin connecting C peptide-like #status experimental <CHC>
F:90-110/Domain: insulin chain A-like #status experimental <CHA>
F:111-118/Domain: D peptide #status experimental <CHD>
F:119-153/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CPRO>
F:54-96,66-109,95-100/Disulfide bonds: #status predicted

Query Match 70.6%; Score 423; DB 1; Length 153;
Best Local Similarity 90.7%; Pred. No. 1.1e-35;
Matches 78; Conservative 1; Mismatches 7; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGPRGFYFNKPTVYGSIRAPQGIYDECCFRSCDLRLRLMY 60
DB 49 GPEITCGAEIVDALQFVCGPRGFYFNKPTVYGSIRAPQGIYDECCFRSCDLRLRLMY 108

QY 61 CVRCKPTKSARSIRAPQRTDMPKTK 86
DB 109 CAPLKPAKSARSVRAQRTDMPKTK 134

RESULT 11
JC2483
Insulin-like growth factor-I precursor - goat
C:Species: Capra aegagrus hircus (domestic goat)
C:Date: 16-Mar-1995 #sequence_revision 26-May-1995 #text_change 17-Mar-1999
C:Accession: JC2483
R:Mikawa, S.; Yoshikawa, G.; Aoki, H.; Yamano, Y.; Sakai, H.; Komano, T.
Biochem. Biotechnol. Biochem. 59; 87-92, 1995
A:Title: Dynamic aspects in the expression of the goat insulin-like growth factor-I (IGF
A:Reference number: JC2483; MUID:95201385; PMID:7765981
A:Molecule type: mRNA
A:Accession: JC2483
A:Residues: 1-154 <MIK>
A:Cross-references: GB:S11378; DDBJ:D26116; DDBJ:D26117; DDBJ:D26118; DDBJ:D26119
C:Genetics:
A:Introns: 21/3; 75/1; 135/3
C:Superfamily: Insulin
F:1-49/Domain: signal sequence #status predicted <SIG>

F:50-119/Product: insulin-like growth factor-I #status predicted <MAT>
F:120-154/Region: E domain

Query Match 70.6%; Score 423; DB 2; Length 154;
Best Local Similarity 90.7%; Pred. No. 1.1e-35;
Matches 78; Conservative 1; Mismatches 7; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGPRGFYFNKPTVYGSIRAPQGIYDECCFRSCDLRLRLMY 60
DB 50 GPEITCGAEIVDALQFVCGPRGFYFNKPTVYGSIRAPQGIYDECCFRSCDLRLRLMY 109

QY 61 CVRCKPTKSARSIRAPQRTDMPKTK 86
DB 110 CAPLKPAKSARSVRAQRTDMPKTK 135

RESULT 12
PN0622
Insulin-like growth factor Ia precursor - dog (fragment)
C:Species: Canis lupus familiaris (dog)
C:Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 07-May-1999
C:Accession: PN0622
R:Belfontaine, P.; Lou, H.; Harrison, D.G.; Bernstein, K.E.
Gene 130; 305-306, 1993
A:Title: Sequence of a cDNA encoding dog insulin-like growth factor I.
A:Reference number: PN0622; MUID:93366192; PMID:8359700
A:Accession: PN0622
A:Molecule type: mRNA
A:Residues: 1-122
A:Comment: This protein is a potent inducer of DNA synthesis in multiple cell types, act
C:Genetics:
A:Gene: IGF1a
C:Superfamily: Insulin
C:Keywords: growth factor
F:20-89/Product: insulin-like growth factor Ia (fragment) #status predicted <MAT>

Query Match 69.8%; Score 418; DB 2; Length 122;
Best Local Similarity 89.5%; Pred. No. 2.9e-35;
Matches 77; Conservative 1; Mismatches 8; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGPRGFYFNKPTVYGSIRAPQGIYDECCFRSCDLRLRLMY 60
DB 20 GPEITCGAEIVDALQFVCGPRGFYFNKPTVYGSIRAPQGIYDECCFRSCDLRLRLMY 79

QY 61 CVRCKPTKSARSIRAPQRTDMPKTK 86
DB 80 CAPLKPAKSARSVRAQRTDMPKTK 105

RESULT 13
IGB01
Insulin-like growth factor Ia precursor - bovine (fragment)
N:Alternate names: IGF-I; somatomedin C
C:Species: Bos primigenius taurus (cattle)
C:Date: 31-Mar-1988 #sequence_revision 28-Apr-1995 #text_change 18-Jun-1999
C:Accession: S12672; A25623; S00465
R:Forstis, T.; Murphy, C.; Gannon, F.
Nucleic Acids Res. 18; 676, 1990
A:Title: Nucleotide sequence of the bovine insulin-like growth factor I (IGF-I) and its
A:Reference number: S12672; MUID:90175014; PMID:2308858
A:Accession: S12672
A:Molecule type: mRNA
A:Residues: 1-153 <FOR>
A:Cross-references: EMBL:X15726; NID:9454; PIDN:CAA33746.1; PID:9455
A:Experimental source: liver
R:Honegger, A.; Humbel, R.E.
J. Biol. Chem. 261; 569-575, 1986
A:Title: Insulin-like growth factors I and II in fetal and adult bovine serum. Purificat
A:Reference number: A92589; MUID:86085881; PMID:3941093
A:Accession: A25623
A:Molecule type: protein
A:Residues: 49-118 <HON>
R:Francis, G.L.; Upton, F.M.; Ballard, F.J.; McNeill, K.A.; Wallace, J.C.

Db 23 GPELTCGAEVLVDALQFVCGPRGFYFNKPTGYGSSIRAPQTGIYDECCFRSCDLRLNEMV 82
 QY 61 CVRCKPTKARSIRARQHTDMPKTQK 86
 Db 83 CAPLKPTKARSIRARQHTDMPKTQK 108

RESULT 8

IGF1
 Insulin-like growth factor I precursor - guinea pig
 C/Species: Cavia porcellus (guinea pig)
 C/Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 07-Nov-1997
 C/Accession: S12719
 R/Bell, G.I., Stempien, M.M., Fong, N.M., Seino, S.
 Nucleic Acids Res. 18, 4275, 1990
 A/Title: Sequence of a cDNA encoding guinea pig IGF-I
 A/Reference number: S12719; MUID:90332447; PMID:2377480
 A/Accession: S12719
 A/Molecule type: mRNA
 A/Residues: 1-137 <BEL>
 A/Cross-references: EMBL:X52951
 A/Note: It is uncertain whether Met-1 or Met-8 is the initiator
 C/Superfamily: Insulin
 C/Keywords: glycoprotein; growth factor; plasma
 F/1-32/Domain: signal sequence #status predicted <SIG>
 F/33-102/Product: insulin-like growth factor I #status predicted <WAT>
 F/33-61/Domain: insulin chain B-like #status predicted <CHB>
 F/62-73/Domain: insulin connecting C peptide-like #status predicted <CHC>
 F/74-94/Domain: insulin chain A-like #status predicted <CHA>
 F/95-102/Domain: D peptide #status predicted <CHD>
 F/103-137/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CHE>
 F/124/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 70.6%; Score 423; DB 1; Length 137;
 Best Local Similarity 90.7%; Pred. No. 9.9e-36;
 Matches 78; Conservative 1; Mismatches 7; Indels 0; Gaps 0;
 QY 1 GPELTCGAEVLVDALQFVCGPRGFYFNKPTGYGSSIRAPQTGIYDECCFRSCDLRLNEMV 60
 Db 33 GPELTCGAEVLVDALQFVCGPRGFYFNKPTGYGSSIRAPQTGIYDECCFRSCDLRLNEMV 92
 QY 61 CVRCKPTKARSIRARQHTDMPKTQK 86
 Db 93 CAPLKPTKARSIRARQHTDMPKTQK 118

RESULT 9

A36552
 Insulin-like growth factor Ia precursor - human
 C/Species: Homo sapiens (man)
 C/Date: 12-Apr-1991 #sequence_revision 12-Apr-1991 #text_change 16-Jul-1999
 C/Accession: A36552
 R/Tobin, G.; Yee, D.; Bruneaux, N.; Rotwein, P.
 Mol. Endocrinol. 4, 1914-1920, 1990
 A/Title: A novel human insulin-like growth factor I messenger RNA is expressed in normal
 A/Reference number: A36552; MUID:9187000; PMID:2082190
 A/Accession: A36552
 A/Status: preliminary
 A/Molecule type: mRNA
 A/Residues: 1-137 <TOB>
 A/Cross-references: GB:M37484; NID:g184833; PIDN:AAA52789.1; PID:g184834
 C/Superfamily: Insulin

Query Match 70.6%; Score 423; DB 2; Length 137;
 Best Local Similarity 90.7%; Pred. No. 9.9e-36;
 Matches 78; Conservative 1; Mismatches 7; Indels 0; Gaps 0;

QY 1 GPELTCGAEVLVDALQFVCGPRGFYFNKPTGYGSSIRAPQTGIYDECCFRSCDLRLNEMV 60
 Db 33 GPELTCGAEVLVDALQFVCGPRGFYFNKPTGYGSSIRAPQTGIYDECCFRSCDLRLNEMV 92
 QY 61 CVRCKPTKARSIRARQHTDMPKTQK 86

Db 93 CAPLKPTKARSIRARQHTDMPKTQK 118

RESULT 10

IGF1
 Insulin-like growth factor I precursor, splice form A [validated] - human
 N/Alternate names: IGF-I long splice form precursor; IGF-1A; somatomedin C
 C/Species: Homo sapiens (man)
 C/Date: 24-Apr-1984 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000
 C/Accession: A92581; A23614; A93321; J05071; A23622; A92226; A60483; S30519; A48960; 1
 R/Rotwein, P.; Pollock, K.M.; Didier, D.K.; Krivi, G.G.
 J. Biol. Chem. 261, 4828-4832, 1986
 A/Title: Organization and sequence of the human insulin-like growth factor I gene. Alt
 A/Reference number: A92581; MUID:86168194; PMID:2937782
 A/Accession: A92581
 A/Molecule type: DNA
 A/Residues: 1-153 <ROT>
 A/Cross-references: GB:M4156; NID:g183107; PIDN:AAA52538.1; PID:g183110
 R/de Pagter-Holthuisen, P.; van Schaik, F.M.A.; Verdijn, G.M.; van Ommen, G.J.B.; Bou
 FBBS Lett. 195, 179-184, 1986
 A/Title: Organization of the human genes for insulin-like growth factors I and II.
 A/Reference number: A93356; MUID:86108862; PMID:3002851
 A/Accession: A23614
 A/Molecule type: DNA
 A/Residues: 24-153 <DEP>
 A/Cross-references: GB:X03420; GB:X00362; NID:g33020; PIDN:CAA27152.1; PID:g33021; GB:
 R/damien, M.; van Schaik, F.M.A.; Ricker, A.T.; Bullock, B.; Woods, D.E.; Gabbay, K.H.
 Nature 306, 609-611, 1983
 A/Title: Sequence of cDNA encoding human insulin-like growth factor I precursor.
 A/Reference number: A93321; MUID:84068210; PMID:6358902
 A/Accession: A93321
 A/Molecule type: mRNA
 A/Residues: 1-153 <JAN>
 A/Cross-references: GB:X00173; NID:g33015; PIDN:CAA24998.1; PID:g33016
 A/Note: Met-24 is proposed as a likely initiator
 R/Steenberg, P.H.; Koonen-Reenst, A.M.C.B.; Cleutjens, C.B.J.M.; Sussenbach, J.S.
 Biochem. Biophys. Res. Commun. 175, 507-514, 1991
 A/Title: Complete nucleotide sequence of the high molecular weight human IGF-I mRNA.
 A/Reference number: J05071; MUID:91207342; PMID:2018498
 A/Accession: J05071
 A/Molecule type: mRNA
 A/Residues: 1-153 <STB>
 A/Cross-references: EMBL:X57025; NID:g33007; PIDN:CAA40342.1; PID:g33008
 R/le Bouc, Y.; Dreyer, D.; Jaeger, F.; Binoux, M.; Sondermeijer, P.
 FEBS Lett. 196, 108-112, 1986
 A/Title: Complete characterization of the human IGF-I nucleotide sequence isolated fr
 A/Reference number: A23622; MUID:86108910; PMID:2935423
 A/Accession: A23622
 A/Molecule type: mRNA
 A/Residues: 1-153 <LEB>
 A/Cross-references: GB:M27544; NID:g184829; PIDN:AAA52787.1; PID:g306927
 R/Rinderknecht, E.; Humbel, R.E.
 J. Biol. Chem. 253, 2769-2776, 1978
 A/Title: The amino acid sequence of human insulin-like growth factor I and its structu
 A/Reference number: A92226; MUID:78130171; PMID:633300
 A/Accession: A92226
 A/Molecule type: protein
 A/Residues: 49-118 <RIN>
 R/Karey, K.P.; Margardt, H.; Sirbasku, D.A.
 Blood 74, 1084-1092, 1989
 A/Title: Human platelet-derived microparticles. Identification of insulinlike growth factors
 A/Reference number: A60483; MUID:89323466; PMID:2752153
 A/Accession: A60483
 A/Molecule type: protein
 A/Residues: 49-53, X, 55-65, X, 67-75 <KAR>
 A/Experimental source: Platelet lysate
 R/Nordqvist Sandberg, A.C.; Stahlbom, P.A.; Lake, M.; Saxe, V.R.
 submitted to the EMBL Data Library, November 1990
 A/Description: Nucleotide sequence of the human fetal brain IGF-1a.
 A/Reference number: S30519
 A/Accession: S30519
 A/Status: preliminary

F:54-96,66-109,95-100/Disulfide bonds: #stratus predicted
 F:172/Modified site: amidated carboxyl end (Arg) (amide in mature form from following gl)

Query Match 77.5%; Score 464; DB 1; Length 195;
 Best Local Similarity 85.3%; Pred. No. 9,5e-40;
 Matches 87; Conservative 3; Mismatches 12; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGPRGFYFNKPTVYGSIRRAPOGTGVDECCFRSCDLRLRLEMY 60
 DB 49 GPEITCGAEIVDALQFVCGPRGFYFNKPTVYGSIRRAPOGTGVDECCFRSCDLRLRLEMY 108

QY 61 CVRCKPTKSARSIRAOHTDMPKTKSQPLSTHKKRKLQRRR 102
 DB 109 CAPLKPAKSARSIRAOHTDMPKTKSQPLSTHKKRKLQRRR 150

RESULT 6
 B27804
 Insulin-like growth factor IA precursor - rat
 N:Alternate names: IGF-1A; somatomedin C
 C:Species: Rattus norvegicus (Norway rat)
 C>Date: 16-Mar-1989 #sequence revision 16-Mar-1989 #text change 21-Jul-2000
 C:Accession: B27804; A27849; J01033; A28504; J00088; A32857; A61096
 R:Shimatsu, A.; Rotwein, P.
 J. Biol. Chem. 262, 7894-7900, 1987
 A:Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence, at
 A:Reference number: A27849; PMID:87222423; PMID:3034909
 A:Accession: A27849

A:Molecule type: mRNA
 A:Residues: 27-153 <CDS>
 A:Cross-references: GB:M17335; NID:G204751; PIDN:AAA4186.1; PID:G204752
 R:Kato, H.; Okoshi, A.; Mura, Y.; Nouchi, T.
 Agric. Biol. Chem. 54, 1599-1601, 1990
 A:Title: A new cDNA clone relating to larger molecular species of rat insulin-like growth
 A:Reference number: J01033; PMID:31103966; PMID:1368571
 A:Accession: J01033

A:Molecule type: mRNA
 A:Residues: 27-153 <KAT>
 A:Cross-references: GB:D00698; NID:G220780; PIDN:BA00604.1; PID:G220781
 A:Experimental source: liver
 R:Murphy, L.J.; Bell, G.I.; Duckworth, M.L.; Friesen, H.G.
 Endocrinology 121, 684-691, 1987
 A:Title: Identification, characterization, and regulation of a rat complementary deoxyri
 A:Reference number: A28504; PMID:87246437; PMID:3595538
 A:Accession: A28504

A:Molecule type: mRNA
 A:Residues: 46-153 <MNR>
 A:Cross-references: GB:M17714; NID:G204324; PIDN:AAA4127.1; PID:G204325
 R:Kato, H.; Takekura, A.; Mura, Y.; Nishiyama, M.; Nouchi, T.
 Agric. Biol. Chem. 54, 2225-2230, 1990
 A:Title: Evidence of introduction by molecular cloning of artificial inverted sequence a
 A:Reference number: J00088; PMID:91136779; PMID:1368576
 A:Accession: J00088

A:Molecule type: mRNA
 A:Residues: 75-153 <QAZ>
 A:Experimental source: liver
 A:Note: the authors present evidence that this mRNA may contain an artifactual inversion
 R:Tamura, K.; Kobayashi, M.; Ishii, Y.; Tamura, T.; Hashimoto, K.; Nakamura, S.; Niva, M.
 J. Biol. Chem. 264, 5616-5621, 1989
 A:Title: Primary structure of rat insulin-like growth factor-I and its biological activi
 A:Reference number: A32857; PMID:89174609; PMID:5538424
 A:Accession: A32857

A:Molecule type: protein
 A:Residues: 49-118 <TAM>
 R:Canalis, E.; McCarthy, T.; Centrella, M.

Endocrinology 122, 22-27, 1988
 A:Title: Isolation and characterization of insulin-like growth factor I (somatomedin-C) f
 A:Reference number: A61096; PMID:88082445; PMID:3335205
 A:Accession: A61096
 A:Molecule type: protein
 A:Residues: 49-53, 'X', 55-65 <CAN>
 C:Superfamily: insulin
 C:Keywords: alternative splicing; growth factor I #status experimental <ILG>
 F:43-118/Product: insulin-like growth factor I

Query Match 74.0%; Score 443; DB 2; Length 153;
 Best Local Similarity 95.3%; Pred. No. 1e-37;
 Matches 82; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGPRGFYFNKPTVYGSIRRAPOGTGVDECCFRSCDLRLRLEMY 60
 DB 49 GPEITCGAEIVDALQFVCGPRGFYFNKPTVYGSIRRAPOGTGVDECCFRSCDLRLRLEMY 108

QY 61 CVRCKPTKSARSIRAOHTDMPKTKSQPLSTHKKRKLQRRR 86
 DB 109 CAPLKPAKSARSIRAOHTDMPKTKSQPLSTHKKRKLQRRR 134

RESULT 7
 A25540
 Insulin-like growth factor IA precursor - mouse
 N:Alternate names: IGF-1A; somatomedin C
 C:Species: Mus musculus (house mouse)
 C>Date: 30-Jun-1988 #sequence revision 30-Jun-1988 #text change 16-Jul-1999
 C:Accession: A25540; I55295; I59090; B25540
 R:Beil, G.I.; Stempfen, M.M.; Fong, N.M.; Rall, L.B.
 Nucleic Acids Res. 14, 7873-7882, 1986
 A:Title: Sequences of liver cDNAs encoding two different mouse insulin-like growth factor
 A:Reference number: A93643; PMID:87040760; PMID:3774549
 A:Accession: A25540

A:Molecule type: mRNA
 A:Residues: 1-127 <BEL>
 A:Cross-references: GB:X04480; NID:G51801; PIDN:CAA28168.1; PID:G51802
 R:Tollfreen, S.E.; Lajara, R.; McCusker, R.H.; Clemmons, D.R.; Rotwein, P.
 J. Biol. Chem. 264, 13810-13817, 1989
 A:Title: Insulin-like growth factors (IGF) in muscle development. Expression of IGF-I, t
 A:Reference number: I55295; PMID:89340472; PMID:2474537
 A:Accession: I55295

A:Status: preliminary; translated from GB/EMBL/DBJ
 A:Molecule type: DNA
 A:Residues: 49-108 <RES>
 A:Cross-references: GB:M28139; NID:G341835; PIDN:AAA74553.1; PID:G550489
 R:Mathews, L.S.; Norstedt, G.; Palmieri, R.D.
 Proc. Natl. Acad. Sci. U.S.A. 83, 9343-9347, 1986
 A:Title: Regulation of insulin-like growth factor I gene expression by growth hormone.
 A:Reference number: I59090; PMID:87092249; PMID:3467309
 A:Accession: I59090

A:Status: preliminary; translated from GB/EMBL/DBJ
 A:Molecule type: DNA
 A:Residues: 49-108 <RE2>
 A:Cross-references: GB:M14983; NID:G194495; PIDN:AAA7925.1; PID:G194496
 A:Gene: igf1
 C:Superfamily: insulin
 C:Keywords: alternative splicing; growth factor
 F:1-22/Domain: signal sequence #status predicted <SIG>
 F:23-127/Product: insulin-like growth factor IA (active) #status predicted <MAT>
 F:23-51/Domain: insulin chain B-like #status predicted <DOB>
 F:52-63/Domain: insulin connecting C peptide-like #status predicted <DOC>
 F:64-84/Domain: insulin chain A-like #status predicted <DOA>
 F:85-92/Domain: D peptide #status predicted <DOP>
 F:93-127/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>

Query Match 73.5%; Score 440; DB 2; Length 127;
 Best Local Similarity 94.2%; Pred. No. 1.8e-37;
 Matches 81; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGPRGFYFNKPTVYGSIRRAPOGTGVDECCFRSCDLRLRLEMY 60

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QY 1 GPEITLCAELVDALQFVCGPRGFYFNKPVTYGGSSIRRAPQTGIVDECCFRSCDLRLLEY 60
DB 49 GPEITLCAELVDALQFVCGPRGFYFNKPVTYGGSSIRRAPQTGIVDECCFRSCDLRLLEY 108
QY 61 CVRCKPTKSARSIRAPQHTDMPKTQKQSLTHKKRLQRRKGSLEEHK 111
DB 109 CAPLKPTKSARSIRAPQHTDMPKTQKQSLTHKKRLQRRKGSLEEHK 159

RESULT 3
A27804
insulin-like growth factor I precursor - rat
C/Species: Rattus norvegicus (Norway rat)
C/Date: 09-Jun-1988 #sequence_revision 09-Jun-1988 #text_change 16-Jul-1999
C/Accession: A27804; 165202
R/Shimatsu, A.; Rotwein, P.
J. Biol. Chem. 262, 7894-7900, 1987
A/Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence, and
A/Reference number: A27804; MUID:87222423; PMID:3034909
A/Accession: A27804
A/Molecule type: DNA
A/Status: preliminary
A/Residues: 1-181 <SHI>
A/Cross-references: GB:M15650; GB:J02743; NID:G204296; PIDN:AAA1214.1; PID:G204299
R/Roberts, C.T.
Biochem. Biophys. Res. Commun. 146, 1154-1159, 1987
A/Title: Rat IGF-I cDNA's contain multiple 5'-untranslated regions.
A/Reference number: 152218; MUID:8728553; PMID:3619921
A/Accession: 165202
A/Status: preliminary; translated from GB/EMBL/DDDB
A/Molecule type: mRNA
A/Residues: 1-27 <RES>
A/Cross-references: GB:M17594; NID:G204759; PIDN:AAA41390.1; PID:G204760
C/Superfamily: insulin
C/Keywords: alternative splicing

Query Match 89.5%; Score 536; DB 2; Length 181;
Best Local Similarity 94.3%; Pred. No. 4.5e-47;
Matches 100; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 GPEITLCAELVDALQFVCGPRGFYFNKPVTYGGSSIRRAPQTGIVDECCFRSCDLRLLEY 60
DB 49 GPEITLCAELVDALQFVCGPRGFYFNKPVTYGGSSIRRAPQTGIVDECCFRSCDLRLLEY 108
QY 61 CVRCKPTKSARSIRAPQHTDMPKTQKQSLTHKKRLQRRKGS 106
DB 109 CAPLKPTKSARSIRAPQHTDMPKTQKQSLTHKKRLQRRKGS 154

RESULT 4
B40912
insulin-like growth factor I precursor form 2 - rat
C/Species: Rattus norvegicus (Norway rat)
C/Date: 28-Feb-1992 #sequence_revision 28-Feb-1992 #text_change 16-Jul-1999
C/Accession: B40912
R/Roberts Jr., C.T.; Laskey, S.R.; Lowe Jr., W.L.; Seaman, W.T.; LeRoith, D.
Mol. Endocrinol. 1, 243-248, 1987
A/Title: Molecular cloning of rat insulin-like growth factor I complementary deoxyribonucleic
A/Accession: A40912; MUID:88288198; PMID:3453891
A/Status: preliminary
A/Molecule type: mRNA
A/Residues: 1-127 <ROB>
A/Cross-references: GB:M15481; NID:G204753; PIDN:AAA41387.1; PID:G204754
C/Superfamily: insulin

Query Match 77.5%; Score 464; DB 2; Length 127;
Best Local Similarity 98.8%; Pred. No. 6.5e-40;
Matches 85; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 GPEITLCAELVDALQFVCGPRGFYFNKPVTYGGSSIRRAPQTGIVDECCFRSCDLRLLEY 60
DB 23 GPEITLCAELVDALQFVCGPRGFYFNKPVTYGGSSIRRAPQTGIVDECCFRSCDLRLLEY 82
QY 61 CVRCKPTKSARSIRAPQHTDMPKTQK 86
DB 83 CVRCKPTKSARSIRAPQHTDMPKTQK 108

RESULT 5
IGHUB
insulin-like growth factor I precursor, splice form B [validated] - human
N/Alternate names: IGF-1b; somatomedin C
N/Contents: insulin-like growth factor IB-E1 amide
C/Species: Homo sapiens (man)
C/Date: 30-Jun-1987 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000
C/Accession: A01611; A26181; S30540; B48960; A42664
R/Rotwein, P.; Pollock, K.M.; Didier, D.K.; Krivi, G.G.
J. Biol. Chem. 261, 4828-4832, 1986
A/Title: Organization and sequence of the human insulin-like growth factor I gene. Alt
A/Reference number: A92581; MUID:86168194; PMID:2937782
A/Accession: A01611
A/Molecule type: DNA
A/Residues: 1-195 <ROT1>
A/Cross-references: GB:M4155; NID:G183106; PIDN:AAA52537.1; PID:G183109
R/Rotwein, P.
Proc. Natl. Acad. Sci. U.S.A. 83, 77-81, 1986
A/Title: Two insulin-like growth factor I messenger RNAs are expressed in human liver.
A/Reference number: A26181; MUID:86094355; PMID:3455760
A/Accession: A26181
A/Molecule type: mRNA
A/Residues: 1-195 <ROT2>
A/Cross-references: GB:M1568; NID:G183111; PIDN:AAA52539.1; PID:G183112
R/Sandberg Nordqvist, A.C.; Ståhlbom, P.A.; Lake, M.; Sara, V.R.
submitted to the EMBL Data Library, November 1990
A/Description: Nucleotide sequence of the human fetal brain IGF-1b.
A/Reference number: S30540
A/Accession: S30540
A/Molecule type: mRNA
A/Residues: 1-195 <SAN>
A/Cross-references: EMBL:X56774; NID:G32991; PIDN:CAA40093.1; PID:G32992
R/Sandberg Nordqvist, A.C.; Ståhlbom, P.A.; Reincke, M.; Collins, V.P.; von Holst, H.
Cancer Res. 53, 2475-2478, 1993
A/Title: Characterization of insulin-like growth factor 1 in human primary brain tumor
A/Reference number: A48960; MUID:93265440; PMID:8495408
A/Accession: B48960
A/Molecule type: mRNA
A/Residues: 1-195 <SA>
A/Cross-references: GB:X56774; GB:S61860; NID:G32991; PIDN:CAA40093.1; PID:G32992
A/Experimental source: anaplastic oligodendroglioma
A/Note: sequence modified after extraction from NCBI backbone
A/Note: the authors translated the codon CAG for residues 124 and 133 as GGU
R/Siegfried, J.M.; Kaepitzky, P.G.; Tresselt, A.M.; Mulshine, J.L.; Quinn, K.A.; Cuttitt
Proc. Natl. Acad. Sci. U.S.A. 89, 8107-8111, 1992
A/Title: A mitogenic peptide amide encoded within the E peptide domain of the insulin-
A/Reference number: A42664; MUID:93390398; PMID:1355646
A/Contents: annotation; IBF-1; amidated carboxyl end
A/Comment: For an alternative splice form, see PIR:IGHU1.
C/Genetics:
A/Genes: GDB:IGF1
A/Cross-references: GDB:120081; OMIM:147440
A/Map position: 12q22-12q24.1
A/Introns: 21/3; 74/1; 134/3
C/Superfamily: insulin
C/Keywords: alternative splicing; amidated carboxyl end; growth factor; plasma
F1-22/48/Domain: signal sequence #status predicted <PRO>
F1-22/48/Domain: propeptide #status predicted <PRO>
F1-22/48/Domain: insulin-like growth factor I #status predicted <MAT>
F1-22/48/Domain: insulin chain B-like #status predicted <CHB>
F1-22/48/Domain: insulin connecting C peptide-like #status predicted <CHC>
F1-22/48/Domain: insulin chain A-like #status predicted <CHA>
F1-11/118/Domain: D peptide #status predicted <CHD>
F1-11/118/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CHE>
F1-11/118/Domain: insulin-like growth factor IB-E1 amide #status predicted <MA2>
F1-11/118/Domain: insulin-like growth factor IB-E1 amide #status predicted <MA2>
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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 3, 2004, 07:50:54 ; Search time 11.7018 Seconds
(without alignments)
912.445 Million cell updates/sec

Title: US-09-852-261-4

Perfect score: 599
Sequence: 1 GPEITCGAEIVDALQFVCGP.....THKCKRLQRRKGSITLBEHK 111

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283366 seqs, 96191526 residues

Total number of hits satisfying chosen parameters: 283366

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-Processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :
1: p1r1:*
2: p1r2:*
3: p1r3:*
4: p1r4:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | Query Match | Length | ID | Description |
|------------|-------|-------------|--------|----------|---------------------|
| 1 | 592 | 98.8 | 133 | 2 A40912 | insulin-like growth |
| 2 | 571 | 95.3 | 159 | 2 A26859 | insulin-like growth |
| 3 | 536 | 89.5 | 181 | 2 A27804 | insulin-like growth |
| 4 | 464 | 77.5 | 127 | 2 B40912 | insulin-like growth |
| 5 | 464 | 77.5 | 195 | 1 IGHU1B | insulin-like growth |
| 6 | 443 | 74.0 | 153 | 2 B27804 | insulin-like growth |
| 7 | 440 | 73.5 | 127 | 2 A25540 | insulin-like growth |
| 8 | 423 | 70.6 | 137 | 1 IGGP1 | insulin-like growth |
| 9 | 423 | 70.6 | 137 | 2 A36552 | insulin-like growth |
| 10 | 423 | 70.6 | 153 | 1 IGHU1 | insulin-like growth |
| 11 | 423 | 70.6 | 153 | 2 JG2483 | insulin-like growth |
| 12 | 418 | 69.8 | 122 | 2 PN0622 | insulin-like growth |
| 13 | 418 | 69.8 | 153 | 1 IGHU1 | insulin-like growth |
| 14 | 418 | 69.8 | 153 | 2 SI2825 | insulin-like growth |
| 15 | 410 | 66.4 | 138 | 2 S22878 | insulin-like growth |
| 16 | 410 | 66.4 | 154 | 2 A33390 | insulin-like growth |
| 17 | 384 | 64.1 | 153 | 2 A43399 | insulin-like growth |
| 18 | 376.5 | 62.9 | 153 | 2 A36079 | insulin-like growth |
| 19 | 362.5 | 60.5 | 161 | 2 C54270 | insulin-like growth |
| 20 | 361 | 60.3 | 155 | 2 C44012 | insulin-like growth |
| 21 | 361 | 60.3 | 176 | 2 A41396 | insulin-like growth |
| 22 | 361 | 60.3 | 188 | 2 A54270 | insulin-like growth |
| 23 | 361 | 60.3 | 188 | 2 B54270 | insulin-like growth |
| 24 | 360 | 60.1 | 149 | 2 D54270 | insulin-like growth |
| 25 | 359 | 59.9 | 176 | 2 A46244 | insulin-like growth |
| 26 | 279.5 | 46.7 | 126 | 2 S66485 | insulin-like growth |
| 27 | 279 | 46.6 | 193 | 2 A53697 | insulin-like growth |
| 28 | 249 | 41.6 | 214 | 2 B46244 | insulin-like growth |
| 29 | 233 | 38.9 | 155 | 1 IGH02 | insulin-like growth |

| | | | | | |
|----|-------|------|-----|----------|---------------------|
| 30 | 232 | 38.7 | 179 | 2 S04858 | insulin-like growth |
| 31 | 224 | 37.4 | 197 | 2 T10897 | insulin-like growth |
| 32 | 223 | 37.2 | 139 | 2 A38612 | insulin-like growth |
| 33 | 222 | 37.1 | 181 | 2 B60738 | insulin-like growth |
| 34 | 221 | 36.9 | 180 | 1 IGHU2 | insulin-like growth |
| 35 | 219.5 | 36.6 | 183 | 2 S02423 | insulin-like growth |
| 36 | 216 | 36.1 | 128 | 2 I57671 | insulin-like growth |
| 37 | 215 | 35.9 | 93 | 2 I53642 | insulin-like growth |
| 38 | 212 | 35.4 | 180 | 2 A24913 | insulin-like growth |
| 39 | 211.5 | 35.3 | 183 | 2 I67610 | insulin-like growth |
| 40 | 209.5 | 35.0 | 180 | 1 IGR12 | insulin-like growth |
| 41 | 204 | 34.1 | 210 | 2 S66484 | insulin-like growth |
| 42 | 184.5 | 30.8 | 79 | 2 I51240 | insulin-like growth |
| 43 | 181 | 30.2 | 66 | 2 A60740 | insulin-like growth |
| 44 | 159 | 26.5 | 44 | 2 A34049 | insulin-like growth |
| 45 | 152.5 | 25.5 | 50 | 1 INF15 | insulin - shortor |

ALIGNMENTS

RESULT 1

A40912
insulin-like growth factor I precursor form 1 - rat

C/Species: Rattus norvegicus (Norway rat)

C/Date: 28-Feb-1992 #sequence_revision 28-Feb-1992 #text_change 16-Jul-1999

C/Accession: A40912

R/Roberts Jr., C.T.; Laaky, S.R.; Lowe Jr., W.L.; Seaman, W.T.; Leinich, D.

Mol. Endocrinol. 1, 243-248, 1987

A/Title: Molecular cloning of rat insulin-like growth factor I complementary deoxyribonuc

C/Issues:

A/Reference number: A40912; PMID:88288198; PMID:3453891

A/Accession: A40912

A/Status: preliminary

A/Molecule type: mRNA

A/Residues: 1-133 <ROB>

A/Cross-References: GB:M15480; NID:G204749; PIDN:AAA41385.1; PID:G204750

C/Superfamily: Insulin

Query Match 98.8%; Score 592; DB 2; Length 133;

Best Local Similarity 99.1%; Pred. No. 7.3e-53;

Matches 110; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGPGRFYFNKPTVYGSIRAPQTGIVDECCFRSCDRLRLMY 60

DB 23 GPEITCGAEIVDALQFVCGPGRFYFNKPTVYGSIRAPQTGIVDECCFRSCDRLRLMY 82

QY 61 CVRCKPTKSARSIRAPQHTDMPKTKSOPSTHKRKLQRRKGSITLBEHK 111

DB 83 CVRCKPTKSARSIRAPQHTDMPKTKSOPSTHKRKLQRRKGSITLBEHK 133

RESULT 2

A26859

insulin-like growth factor IB precursor - rat

C/Species: Rattus norvegicus (Norway rat)

C/Date: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change 16-Jul-1999

C/Accession: A26859

R/Shimatsu, A.; Rotwein, P.

Nucleic Acids Res. 15, 7196, 1987

A/Title: Sequence of two rat insulin-like growth factor I mRNAs differing within the 5' l

A/Reference number: A26859; PMID:88015572; PMID:3658684

A/Accession: A26859

A/Molecule type: mRNA

A/Residues: 1-159 <SHI>

A/Cross-References: GB:X06107; GB:M32260; GB:Y00429; NID:G56424; PIDN:CAA29480.1; PID:G56

C/Superfamily: Insulin

C/Keywords: alternative splicing; growth factor

Query Match 95.3%; Score 571; DB 2; Length 159;

Best Local Similarity 96.4%; Pred. No. 1.1e-50;

Matches 107; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

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RA Rotwein P., Kajimoto Y.;
RT "Structure of the chicken insulin-like growth factor I gene reveals
RT conserved promoter elements.";
RL J. Biol. Chem. 266:9724-9731(1991).
RN [3]
RP SEQUENCE OF 49-118.
RX MEDLINE=91106695; PubMed=2272467;
RA Ballard F.J., Johnson R.J., Owens P.C., Francis G.L., Upton F.M.,
RA McMurtry J.P., Wallace J.C.; Owens P.C., Francis G.L., Upton F.M.,
RT "Chicken insulin-like growth factor-I: amino acid sequence,
RT radioimmunoassay, and plasma levels between strains and during
RT growth.";
RL Gen. Comp. Endocrinol. 79:459-468(1990).
CC -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the insulin family.
CC -----
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CC or send an email to license@isb-sib.ch).
CC -----
DR EMBL; M32791; AAA48828.1; -.
DR EMBL; M74176; AAA48829.1; -.
DR PIR; A41399; A41399.
DR HSSP; P01343; IGF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma; Signal.
FT SIGNAL 1 48
FT PROPEP ? 48
FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR I.
FT DOMAIN 49 77 B.
FT DOMAIN 78 89 C.
FT DOMAIN 90 110 A.
FT DOMAIN 111 118 D.
FT PROPEP 119 153 E. PEPTIDE.
FT DISULFID 54 96 BY SIMILARITY.
FT DISULFID 66 109 BY SIMILARITY.
FT DISULFID 95 100 BY SIMILARITY.
SQ SEQUENCE 153 AA; 17267 MW; AAEL3PDED13EE2F8 CRC64;

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Query Match 64.1%; Score 384; DB 1; Length 153;
Best Local Similarity 70.8%; Pred. No. 9.8e-35;
Matches 75; Conservative 6; Mismatches 17; Indels 8; Gaps 2;

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QY 1 GPEITLGAELVDALQFYCGPFGFYFNKPTVYGVSSIRAPQGTGIVDECCFRCSDLRLEMY 60
DB 49 GPEITLGAELVDALQFYCGPFGFYFNKPTVYGVSSIRAPQGTGIVDECCFRCSDLRLEMY 108
QY 61 CVRCKPTKASASIRASQRTDMPKTKQSQPLSTHKRKLQRRKSGST 106
DB 109 CAPIKPKKASASVRAQRHTDMPKAQK---EVH---LKNTSRGNT 146

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Search completed: March 3, 2004, 08:05:42
Job time : 9.0241 secs

| Query Match | Best Local Similarity | 68.4% | Score 410; | DB 1; | Length 154; |
|-------------|-----------------------|--|------------|------------|-------------|
| Matches | 76; | Conservative | 1; | Mismatches | 9; |
| | | | | Indels | 0; |
| | | | | Gaps | 0; |
| Qy | 1 | GPETLCAELVDALDFVCGPRGFYNNKPTVYSSSIRAPQNTSIVBCCRSGLRLRLMY | 60 | | |
| Db | 50 | GPETLCAELVDALDFVCGPRGFYNNKPTVYSSSIRAPQNTSIVBCCRSGLRLRLMY | 109 | | |
| Qy | 61 | CVRCCKPYKSARSIRAPQNTSIVBCCRSGLRLRLMY | 86 | | |
| Db | 110 | CAPLKAASARSVRAQRHTDMPKAK | 135 | | |

RESULT 14

| IGF1_COTUA | STANDARD; | PRT; | 124 AA. |
|------------|--|------|---------|
| IGF1_COTUA | | | |
| AC | PS1462; | | |
| DT | 01-OCT-1996 (Rel. 34, Created) | | |
| DT | 01-OCT-1996 (Rel. 34, Last sequence update) | | |
| DT | 10-OCT-2003 (Rel. 42, Last annotation update) | | |
| DE | Insulin-like growth factor I precursor (IGF-I) (Somatomedin) | | |
| DE | (Fragment). | | |
| GN | IGF1. | | |
| OS | Coturnix coturnix japonica (Japanese quail). | | |
| CC | Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; | | |
| CC | Archosauromorpha; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae; | | |
| CC | Coturnix | | |
| CX | NCBI_TaxID=93934; | | |
| RX | SEQUENCE FROM N.A. | | |
| RP | MEDLINE=95187621; PubMed=7881819; | | |
| RA | Kida S., Iwaki M., Nakamura A., Miura Y., Takenaka A., Takahashi S., | | |
| RA | Noguchi T.; | | |
| RT | "Insulin-like growth factor-I messenger RNA content in the oviduct of | | |
| RT | Japanese quail (Coturnix coturnix japonica): changes during growth | | |
| RT | and development or after estrogen administration." | | |

```

RL Comp. Biochem. Physiol. 109C:191-204(1994).
CC
CC -I- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC -I- SUBCELLULAR LOCATION: Secreted.
CC -I- SIMILARITY: Belongs to the insulin family.
CC -----
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CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC -----
DR EMBL; S75247; -; NOT_ANNOTATED_CDS.
DR HSBP; P01343; IGF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma.
FT FT NON_TER 1 1
FT FT PROPEP <1 19 POTENTIAL.
FT FT CHAIN 20 89 INSULIN-LIKE GROWTH FACTOR 1.
FT FT DOMAIN 20 48 B.
FT FT DOMAIN 49 60 C.
FT FT DOMAIN 61 81 A.
FT FT DOMAIN 82 89 D.
FT FT PROPEP 90 124 E.PEPTIDE.
FT FT DISULFID 25 67 BY SIMILARITY.
FT FT DISULFID 37 80 BY SIMILARITY.
FT FT DISULFID 66 71 BY SIMILARITY.
SQ SEQUENCE 124 AA; 13888 MM; 52254EB1BA52C386 CRC64;

Query Match 64.1%; Score 384; DB 1; Length 124;
Best Local Similarity 70.8%; Pred. No. 7,7e-35;
Matches 75; Conservative 6; Mismatches 17; Indels 8; Gaps 2;

QY 1 GPELTCAAEIVDMLQFCVGRGFYFNRPYVGGSSIRRAPQGTIVDECCFSCDRLREMY 60
Db 20 GPELTCAAEIVDMLQFCVGRGRGFYFSRPYVGGSSRRHHKGIYDECCFQSCDLRLREMY 79
QY 61 CVRCKPFYKARSIRAPQRTDMPTQKQSPUSTHKRRQLQRRKQST 106
Db 80 CAPIKPKXSARSYRAQRHTDMPKRAQK-----EVH-----LKQTISRGNT 117

RESULT 15
IGF1_CHICK STANDARD; PRT; 153 AA.
ID IGF1_CHICK
AC P18254;
DT 01-NOV-1990 (Rel. 16, Created)
DT 01-NOV-1990 (Rel. 16, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
GN IGF1.
OS Gallus gallus (Chicken).
OC Archaeoptila; Metacoda; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Eukaryota; Metazoa; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC Gallus.
OC NCBI_TaxID=9031;
CX [1]
RN
RP SEQUENCE FROM N.A.
RX MEDLINE=90150648; PubMed=2628728;
RA Kajimoto Y., Kotwein P.;
RT "Structure and expression of a chicken insulin-like growth factor I
RT precursor.";
RL Mol. Endocrinol. 3:1907-1913(1989).
RN [2]
RP SEQUENCE OF 1-21 FROM N.A.
RX MEDLINE=91236750; PubMed=2033062;

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RT "Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences
RT and biological activities compared with those of a potent truncated
RT form.";
RL Biochem. J. 251:95-103(1988).
CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the insulin family.
CC -----
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CC -----
DR EMBL; X15726; CA33746.1; -;
DR EMBL; S76122; AAD14209.1; -;
DR PIR; S12672; IGB01.
DR HSP; P01343; IGF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PRO0277; INSULIN.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
DR Insulin family; Growth factor; Plasma; Signal.
KW SIGNAL
FT PROPEP 1 49
FT CHAIN 50 119 INSULIN-LIKE GROWTH FACTOR I.
FT DOMAIN 50 78 B.
FT DOMAIN 79 90 C.
FT DOMAIN 91 111 A.
FT DOMAIN 112 119 D.
FT PROPEP 120 154 E. PEPTIDE.
FT DISULFID 55 97 BY SIMILARITY.
FT DISULFID 67 110 BY SIMILARITY.
FT DISULFID 96 101 BY SIMILARITY.
SQ SEQUENCE 154 AA; 17066 MW; 64201B6AF3140999 CRC64;

Query Match 69.8%; Score 418; DB 1; Length 154;
Best Local Similarity 89.5%; Pred. No. 2e-38;
Matches 77; Conservative 1; Mismatches 8; Indels 0; Gaps 0;

QY 1 GPEFLCGAEVDAIOFVGPGFENKPTVGVSSIRAPOTGIYDECCFSSCDLRLEMY 60
DB 50 GPEFLCGAEVDAIOFVGPGFENKPTVGVSSIRAPOTGIYDECCFSSCDLRLEMY 109

QY 61 CVRCKPTKSARSIRAPORTDMPKTK 86
DB 110 CAPLKPASARSVRAQRHTDMPKAK 135

RESULT 13
IGF1 SHEEP STANDARD; PRT; 154 AA.
AC P10763;
DT 01-JUL-1989 (Rel. 11, Created)
DT 01-FEB-1991 (Rel. 17, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
GN IGF1.
OS Ovis aries (sheep).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovidae; Caprinae; Ovis.
CC NCI_TaxID=9940;
CX [1]
EN SEQUENCE FROM N.A.
RP TISSUE=Liver;
RC MEDLINE=90126234; PubMed=2575490;
RA Wong E.A., Ohlsen S.M., Godfredson J.A., Dean D.M., Wheaton J.E.;

RT "Cloning of ovine insulin-like growth factor-I cDNAs: heterogeneity
RT in the mRNA population.";
RL DNA 8:649-657(1989).
CC (2)
CC SEQUENCE FROM N.A.
CC TISSUE=Liver;
CC MEDLINE=91197361; PubMed=2015053;
CC Dickinson M.C., Saunders J.C., Gilmore R.S.;
CC "The ovine insulin-like growth factor-I gene: characterization,
CC expression and identification of a putative promoter.";
CC J. Mol. Endocrinol. 6:17-31(1991).
CC [3]
CC SEQUENCE FROM N.A.
CC TISSUE=Liver;
CC MEDLINE=9321682; PubMed=8466647;
CC Ohlsen S.M., Dean D.M., Wong E.A.;
CC "Characterization of multiple transcription initiation sites of the
CC ovine insulin-like growth factor-I gene and expression profiles of
CC three alternatively spliced transcripts.";
CC DNA Cell Biol. 12:243-251(1993).
CC [4]
CC SEQUENCE OF 55-135 FROM N.A.
CC STRAIN=Coopworth; TISSUE=Liver;
CC MEDLINE=93250051; PubMed=8485157;
CC Demmer J., Hill D.F., Petersen G.B.;
CC "Characterization of two sheep insulin-like growth factor II cDNAs
CC with different 5'-untranslated regions.";
CC Biochim. Biophys. Acta 1173:79-80(1993).
CC [5]
CC SEQUENCE OF 50-119.
CC MEDLINE=89136887; PubMed=2537174;
CC Francis G.L., McNeill K.A., Wallace J.C., Ballard F.J., Owens P.C.;
CC "Sheep insulin-like growth factors I and II: sequences, activities
CC and assays.";
CC Endocrinology 124:1173-1183(1989).
CC [6]
CC SEQUENCE OF 50-79.
CC MEDLINE=89323215; PubMed=2752053;
CC Hey A.W., Browne C.A., Simpson R.J., Thorburn G.D.;
CC "Simultaneous isolation of insulin-like growth factors I and II from
CC adult sheep serum.";
CC Biochim. Biophys. Acta 997:27-35(1989).
CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=3;
CC Name=B;
CC IsoId=P10763-1; Sequence=Displayed;
CC Name=A;
CC IsoId=P10763-2; Sequence=VSP_002707;
CC Name=C;
CC IsoId=P10763-3; Sequence=VSP_002706;
CC -1- SIMILARITY: Belongs to the insulin family.
CC -----
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CC -----
DR EMBL; M30653; AAA80532.1; -;
DR EMBL; M30653; AAA80533.1; -;
DR EMBL; M31734; AAA80535.1; -;
DR EMBL; M31734; AAA80534.1; -;
DR EMBL; M31736; AAA11545.1; -;
DR EMBL; M31735; AAA11546.1; -;
DR EMBL; M31735; AAA11547.1; -;
DR EMBL; X69472; CAA49230.1; -;
DR EMBL; X69473; CAA49230.1; JOINED.

FT DISULFID 66 71 BY SIMILARITY.
 SQ SEQUENCE 122 AA; 13407 MW; 036A004DC44E7D75 CRC64;
 Query Match 69.8%; Score 418; DB 1; Length 122;
 Best Local Similarity 89.5%; Pred. No. 1,5e-38;
 Matches 77; Conservative 1; Mismatches 8; Indels 0; Gaps 0;

QY 1 GPEITLCAELVDALQFVCGPRGPFYFNKPTVYSSIRAPQGIYDECCFSCDLRLRLEMY 60
 DB 20 GPEITLCAELVDALQFVCGPRGPFYFNKPTVYSSIRAPQGIYDECCFSCDLRLRLEMY 79
 QY 61 CVRCKPTKARSIRAPQHTDMPKTK 86
 DB 80 CAPLKPAKSARSVRAQRHTDMPKAK 105

RESULT 11
 ID IGFI_PIG STANDARD; PRT; 153 AA.
 AC P16545;
 DT 01-AUG-1990 (Rel. 15, Created)
 DT 01-AUG-1990 (Rel. 15, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
 GN IGFI.
 OS Sus. scrofa (Pig).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Cetartiodactyla; Suidae; Sus.
 ON NCBI_TaxID=9823;
 RX MEDLINE=90221822; PubMed=2326169;
 RA Mueller M., Brem G.;
 RT "Nucleotide sequence of porcine insulin-like growth factor. 1:5'
 RT untranslated region, exons 1 and 2 and mRNA.";
 RL Nucleic Acids Res. 18:364-364 (1990).
 [2]
 RP SEQUENCE OF 20-153 FROM N.A.
 RX MEDLINE=89069596; PubMed=3211153;
 RA Tavakkoli A., Simmen P.A., Simmen R.C.M.;
 RT "Porcine insulin-like growth factor-I (pIGF-I): complementary
 RT ribonucleic acid cloning and uterine expression of messenger
 RT Mol. Endocrinol. 2:674-681 (1988).
 [3]
 RP SEQUENCE OF 1-21 FROM N.A.
 RC STRAIN=White Landrace; TISSUE=liver;
 RX MEDLINE=94128209; PubMed=8297476;
 RA Weller P.A., Dickson M.C., Huskisson N.S., Dauncey M.J., Buttery P.J.,
 RA Gilmour R.S.;
 RT "The porcine insulin-like growth factor-I gene: characterization and
 RT expression of alternate transcription sites.";
 RL J. Mol. Endocrinol. 11:201-211 (1993).
 [1]
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the insulin family.
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 CC
 DR EMBL: X17493; CAA35527.1;
 DR EMBL: X52388; CAA36617.1;
 DR EMBL: X52077; CAA36296.1;
 DR EMBL: M31175; AAA31043.1; ALT_INIT.
 DR EMBL: X17638; CAA35632.1;
 DR PIR: S12825; S12825.

DR HSSP; P01343; IGFI.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Signal.

FT SIGNAL 1 ?
 FT PROPEP 48
 FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 49 77 B.
 FT DOMAIN 78 89 C.
 FT DOMAIN 90 110 A.
 FT DOMAIN 111 118 D.
 FT PROPEP 119 153 E. PEPTIDE.
 FT DISULFID 54 96 BY SIMILARITY.
 FT DISULFID 66 109 BY SIMILARITY.
 FT DISULFID 95 100 BY SIMILARITY.
 SQ SEQUENCE 153 AA; 17010 MW; 6098792DCDA0CD7D CRC64;

Query Match 69.8%; Score 418; DB 1; Length 153;
 Best Local Similarity 89.5%; Pred. No. 2e-38;
 Matches 77; Conservative 1; Mismatches 8; Indels 0; Gaps 0;

QY 1 GPEITLCAELVDALQFVCGPRGPFYFNKPTVYSSIRAPQGIYDECCFSCDLRLRLEMY 60
 DB 49 GPEITLCAELVDALQFVCGPRGPFYFNKPTVYSSIRAPQGIYDECCFSCDLRLRLEMY 108
 QY 61 CVRCKPTKARSIRAPQHTDMPKTK 86
 DB 109 CAPLKPAKSARSVRAQRHTDMPKAK 134

RESULT 12
 ID IGFI_BOVIN STANDARD; PRT; 154 AA.
 AC P07455;
 DT 01-APR-1988 (Rel. 07, Created)
 DT 01-NOV-1991 (Rel. 20, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
 GN Bos taurus (Bovine).
 OS Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
 OC Bovidae; Bovinae; Bos.
 ON NCBI_TaxID=9913;
 RX MEDLINE=90175014; PubMed=2308858;
 RA Focsis T., Murphy C., Gannon F.;
 RT "Nucleotide sequence of the bovine insulin-like growth factor 1
 RT (IGF-1) and its IGF-1A precursor.";
 RL Nucleic Acids Res. 18:676-676 (1990).
 [2]
 RP SEQUENCE OF 50-119 FROM N.A.
 RX MEDLINE=95172127; PubMed=7867698;
 RA Schmidt A., Einspahrer R., Amseelgruber W., Sinowatz F., Schams D.;
 RT "Expression of insulin-like growth factor 1 (IGF-I) in the bovine
 RT oviduct during the oestrous cycle.";
 RL Exp. Clin. Endocrinol. 102:364-369 (1994).
 [3]
 RP SEQUENCE OF 50-119.
 RX MEDLINE=86085881; PubMed=3941093;
 RA Homberger A., Hummel R.B.;
 RT "Insulin-like growth factors I and II in fetal and adult bovine
 RT serum. Purification, primary structures, and immunological
 RT cross-reactivities.";
 RL J. Biol. Chem. 261:569-575 (1986).
 [4]
 RP SEQUENCE OF 50-119.
 RX MEDLINE=88268820; PubMed=3390164;
 RA Francis G.L., Upton F.W., Ballard F.J., McNeill K.A., Wallace J.C.;

Query Match 70.6%; Score 423; DB 1; Length 153;
 Best Local Similarity 90.7%; Pred. No. 5.7e-39;
 Matches 78; Conservative 1; Mismatches 7; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRRAPQGTIVDECCFRSCDLRLRLMY 60
 DB 49 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRRAPQGTIVDECCFRSCDLRLRLMY 108

QY 61 CVRCKPTKSARSIRAPQHTDMPKTK 86
 DB 109 CAPLKPASARSVRAQRHTDMPKTK 134

RESULT 9
 IGF1_CAPH1 STANDARD; PRT; 154 AA.
 ID IGF1_CAPH1
 AC P51457;
 DT 01-OCT-1996 (Rel. 34, Created)
 DT 16-OCT-2001 (Rel. 40, Last sequence update)
 DT 15-MAR-2004 (Rel. 43, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
 GN IGF1.
 OS Capra hircus (Goat).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
 OC Bovidae; Caprinae; Capra.
 CX NCBI_TaxID=9925;
 RX MEDLINE=95290780; PubMed=7772848;
 RA Miyawaki S., Yoshikawa G.-I., Yamano Y., Sakai H., Komano T., Hosoi Y.,
 RA Utsumi K.;
 RT "Tissue- and development-specific expression of goat insulin-like
 growth factor-I (IGF-I) mRNA.";
 RL Biosci. Biotechnol. Biochem. 59:759-761(1995).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 are structurally and functionally related to insulin but have a
 much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- TISSUE SPECIFICITY: Expressed in all tissues examined: brain,
 lung, liver, spleen, uterus, ovary, testis, heart and skeletal
 muscle.
 CC -1- SIMILARITY: Belongs to the insulin family.
 CC
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EMBL; D11378; BAA01976.1; -;
 EMBL; D26119; BAB77524.1; ALT SEQ.
 EMBL; D26116; BAB77524.1; JOINED.
 EMBL; D26117; BAB77524.1; JOINED.
 EMBL; D26118; BAB77524.1; JOINED.
 PIR; JC2483; JC2483.
 HSSP; P01343; IGF1.
 DR InterPro: IPR004825; Ins/IGF/relax.
 DR Pfam: PF00049; Insulin; 1.
 DR PRINTS: PR00277; INSULINB.
 SMART; SM00078; IGF. 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Signal.
 FT SIGNAL 1
 FT PROPEP ? 49 BY SIMILARITY.
 FT CHAIN 50 119 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 50 78 B.
 FT DOMAIN 79 90 C.
 FT DOMAIN 91 111 A.

FT DOMAIN 112 119 D.
 FT PROPEP 120 154 E PEPTIDE.
 FT DISULFID 55 97 BY SIMILARITY.
 FT DISULFID 67 110 BY SIMILARITY.
 FT DISULFID 96 101 BY SIMILARITY.
 SQ SEQUENCE 154 AA; 17082 MW; 07238B6AF3068422 CRC64;

Query Match 70.6%; Score 423; DB 1; Length 154;
 Best Local Similarity 90.7%; Pred. No. 5.8e-39;
 Matches 78; Conservative 1; Mismatches 7; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRRAPQGTIVDECCFRSCDLRLRLMY 60
 DB 50 GPEITCGAELVDALQFVCGPRGFYFNKPTVYSSIRRAPQGTIVDECCFRSCDLRLRLMY 109

QY 61 CVRCKPTKSARSIRAPQHTDMPKTK 86
 DB 110 CAPLKPASARSVRAQRHTDMPKTK 135

RESULT 10
 IGF1_CANFA STANDARD; PRT; 122 AA.
 ID IGF1_CANFA
 AC P93712;
 DT 01-FEB-1994 (Rel. 28, Created)
 DT 01-FEB-1994 (Rel. 28, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
 DE (fragment).
 GN IGF1 OR IGF1A.
 OS Canis familiaris (Dog).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
 CX NCBI_TaxID=9615;
 RX MEDLINE=9336192; PubMed=8359700;
 RA Delafontaine P., Hou H., Harrison D.G., Bernstein K.E.;
 RL Gene 130:305-306(1993).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 are structurally and functionally related to insulin but have a
 much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the insulin family.
 CC
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EMBL; L08254; -; NOT_ANNOTATED_CDS.
 PIR; PNO622; PNO622.
 DR HSSP; P01343; IGF1.
 DR InterPro: IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IGF. 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Signal.
 FT SIGNAL 1
 FT CHAIN <1 19 BY SIMILARITY.
 FT DOMAIN 20 89 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 20 48 B.
 FT DOMAIN 49 60 C.
 FT DOMAIN 61 81 A.
 FT DOMAIN 82 89 D.
 FT PROPEP 90 122 E PEPTIDE.
 FT DISULFID 25 67 BY SIMILARITY.
 FT DISULFID 37 60 BY SIMILARITY.

RT "Organization of the human genes for insulin-like growth factors I
 RT and II.";
 CC FEBS Lett. 195:179-184(1986).
 RN [5]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=91207342; PubMed=2018498;
 RA Sreenbergh P.H., Koonen-Reemer A.M.C.B., Cleutjens C.B.J.M.,
 RT Sussenbach J.S.,
 RT "Complete nucleotide sequence of the high molecular weight human
 RT IGF-I mRNA.";
 RL Biochem. Biophys. Res. Commun. 175:507-514(1991).
 RL [6]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Brain;
 RX MEDLINE=92186627; PubMed=1372070;
 RA Sandberg Nordqvist A.C., Stahlbom P.A., Lake M., Sara V.R.,
 RT "Characterization of two cDNAs encoding insulin-like growth factor 1
 RT (IGF-1) in the human fetal brain.";
 RL Brain Res. Mol. Brain Res. 12:275-277(1992).
 RL [7]
 RP SEQUENCE OF 24-50 AND 119-153 FROM N.A.
 RX MEDLINE=94295593; PubMed=6392022;
 RA Dull T.J., Gray A., Hayflick J.S., Ullrich A.,
 RT "Insulin-like growth factor II precursor gene organization in
 RT relation to insulin gene family.";
 RL Nature 310:777-781(1984).
 RL [8]
 RP SEQUENCE OF 49-118
 RX MEDLINE=78130171; PubMed=632300;
 RA Rinderknecht E., Humbel R.E.,
 RT "The amino acid sequence of human insulin-like growth factor I and
 RT its structural homology with proinsulin.";
 RL J. Biol. Chem. 253:2769-2776(1978).
 RL [9]
 RP 3D-STRUCTURE MODELING.
 RX MEDLINE=83210259; PubMed=6189745;
 RA Blundell T.L., Bedarkar S., Humbel R.E.,
 RT "Tertiary structures, receptor binding, and antigenicity of
 RT insulinlike growth factors.";
 RL Fed. Proc. 42:2592-2597(1983).
 RL [10]
 RP STRUCTURE BY NMR.
 RX MEDLINE=91242464; PubMed=2036417; I.D.;
 RA Cooke R.M., Harvey T.S., Campbell I.D.,
 RT "Solution structure of human insulin-like growth factor 1: a nuclear
 RT magnetic resonance and restrained molecular dynamics study.";
 RL Biochemistry 30:5484-5491(1991).
 RL [11]
 RP STRUCTURE BY NMR.
 RX MEDLINE=92316903; PubMed=1319992;
 RA Sato A., Nishimura S., Okubo T., Kyogoku Y., Koyama S., Kobayashi M.,
 RT Yasuda T., Kobayashi Y.,
 RT "H-NMR assignment and secondary structure of human insulin-like
 RT growth factor-I (IGF-I) in solution.";
 RL J. Biochem. 111:529-536(1992).
 RL [12]
 RP DISULFIDE BONDS.
 RX MEDLINE=89207850; PubMed=3242681;
 RA Raschdorf P., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.,
 RT "Location of disulphide bonds in human insulin-like growth factors
 RT (IGFs) synthesized by recombinant DNA technology.";
 RL Biomed. Environ. Mass Spectrom. 16:3-8(1988).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- ALTERNATIVE PRODUCTS:
 CC Name=IGF-1A;
 CC IsoId=P01343-1; Sequence=Displayed;
 CC Name=IGF-1B;
 CC IsoId=P05019-1; Sequence=External;

CC -1- SIMILARITY: Belongs to the insulin family.
 CC -----
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 CC -----
 DR EMBL; M14156; AAA52538.1; -;
 DR EMBL; M12659; AAA52538.1; JOINED.
 DR EMBL; M14153; AAA52538.1; JOINED.
 DR EMBL; M14154; AAA52538.1; JOINED.
 DR EMBL; X00173; CAA24398.1; -;
 DR EMBL; X03563; CAA27250.1; ALT_SEQ.
 DR EMBL; M27544; AAA52787.1; -;
 DR EMBL; X03420; CAA27152.1; -;
 DR EMBL; X03421; CAA27153.1; -;
 DR EMBL; X03422; CAA27154.1; -;
 DR EMBL; X57025; CAA40342.1; -;
 DR EMBL; X56773; CAA40092.1; -;
 DR PIR; A92581; IGHU1.
 DR PDB; 1GF1; 15-OCT-94.
 DR PDB; 2GF1; 15-APR-93.
 DR PDB; 3GF1; 15-APR-93.
 DR PDB; 1B9G; 23-FEB-99.
 DR PDB; 1G2R; 02-OCT-02.
 DR PDB; 1G2Y; 02-OCT-02.
 DR PDB; 1G2Z; 25-JUL-02.
 DR PDB; 1H02; 25-JUL-02.
 DR PDB; 1H59; 16-MAY-02.
 DR PDB; 1IMX; 03-OCT-01.
 DR Genem; HGNC:5464; IGF1.
 DR MIM; 147440; -;
 DR MIM; 265850; -;
 DR GO; GO:0005159; F:insulin-like growth factor receptor binding; TAS.
 DR GO; GO:0005180; F:peptide hormone; TAS.
 DR GO; GO:0006928; P:cell motility; TAS.
 DR GO; GO:0006260; P:DNA replication; TAS.
 DR GO; GO:0009441; P:glycolate metabolism; TAS.
 DR GO; GO:0007517; P:muscle development; TAS.
 DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
 DR GO; GO:0007265; P:RAS protein signal transduction; TAS.
 DR GO; GO:0007165; P:signal transduction; TAS.
 DR GO; GO:0001501; P:skeletal development; TAS.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PRO0277; INSULINB.
 DR SMART; SM00078; IGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; 3D-structure;
 KW Alternative splicing; Signal.
 FT SIGNAL 1 21 POTENTIAL.
 FT PROPEP 22 48
 FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR 1A.
 FT DOMAIN 49 77 B.
 FT DOMAIN 78 89 C.
 FT DOMAIN 90 110 A.
 FT DOMAIN 111 118 D.
 FT PROPEP 119 153 E PEPTIDE.
 FT DISULFD 54 96
 FT DISULFD 66 109
 FT DISULFD 95 100
 FT STRAND 51 51
 FT TURN 55 55
 FT TURN 56 69
 FT TURN 87 88
 FT TURN 91 95
 FT TURN 96 97
 FT STRAND 99 99
 FT HELIX 106 109
 FT SEQUENCE 153 AA; 17026 MW; C6ECD92DCA9B37BC CRC64;

EMBL; X04480; CAA28168.1; -.
 DR PIR; A25540; A25540.
 DR HSSP; P01343; IGF1.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 DR Insulin family; Growth factor; Plasma; Signal.
 DR CHAIN 1 22
 FT CHAIN 1 22
 FT DOMAIN 23 92 INSULIN-LIKE GROWTH FACTOR IA.
 FT DOMAIN 52 51 B.
 FT DOMAIN 52 63 C.
 FT DOMAIN 64 84 A.
 FT DOMAIN 85 92 D.
 FT PROPEP 93 127 E PEPTIDE.
 FT DISULFID 28 70 BY SIMILARITY.
 FT DISULFID 40 83 BY SIMILARITY.
 FT DISULFID 69 74 BY SIMILARITY.
 SQ SEQUENCE 127 AA; 14120 MW; 105488C672DC2D7 CRC64;
 Query Match 73.5%; Score 440; DB 1; Length 127;
 Best Local Similarity 94.2%; Pred. No. 6.6e-41;
 Matches 81; Conservative 1; Mismatches 4; Indels 0; Gaps 0;
 QY 1 GPEITLGAELVDALQFVCGPRGPFYFNKPTVTGSSIRRAPQGTIVDECCFRSCDRLRLMY 60
 DB 23 GPEITLGAELVDALQFVCGPRGPFYFNKPTVTGSSIRRAPQGTIVDECCFRSCDRLRLMY 82
 QY 61 CVRCCKPTKSARSIRAPRHTDMPKTK 86
 DB 83 CAPLKPTRAKRSIRAPRHTDMPKTK 108
 RESULT 7
 IGF1_CAVPO STANDARD; PRT; 130 AA.
 AC P17647
 DT 01-AUG-1990 (Rel. 15, Created)
 DT 01-AUG-1990 (Rel. 15, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin C).
 GN IGF1.
 OS Cavia porcellus (Guinea pig).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
 OX NCBI_TaxID=10141;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Pancreas;
 RX MEDLINE=90332447; PubMed=2377480;
 RA Bell G.I., Stempien M.M., Fong N.M., Scino S.;
 RT "Sequence of a cDNA encoding guinea pig IGF-I";
 RL Nucleic Acids Res. 18:4275-4275(1990).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the insulin family.
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 CC -----
 CC EMBL; X52951; CAA37127.1; -.
 CC PIR; S12719; IGGP1.

HSSP; P01343; IGF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 DR Insulin family; Growth factor; Plasma; Signal.
 DR CHAIN 1 25
 FT CHAIN 1 25
 FT DOMAIN 26 95 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 55 54 B.
 FT DOMAIN 55 66 C.
 FT DOMAIN 67 87 A.
 FT DOMAIN 88 95 D.
 FT PROPEP 96 130 E PEPTIDE.
 FT DISULFID 31 73 BY SIMILARITY.
 FT DISULFID 43 86 BY SIMILARITY.
 FT DISULFID 72 77 BY SIMILARITY.
 SQ SEQUENCE 130 AA; 14342 MW; 251B20AEDC5729FF CRC64;
 Query Match 70.6%; Score 423; DB 1; Length 130;
 Best Local Similarity 90.7%; Pred. No. 4.8e-39;
 Matches 78; Conservative 1; Mismatches 7; Indels 0; Gaps 0;
 QY 1 GPEITLGAELVDALQFVCGPRGPFYFNKPTVTGSSIRRAPQGTIVDECCFRSCDRLRLMY 60
 DB 26 GPEITLGAELVDALQFVCGPRGPFYFNKPTVTGSSIRRAPQGTIVDECCFRSCDRLRLMY 85
 QY 61 CVRCCKPTKSARSIRAPRHTDMPKTK 86
 DB 86 CAPLKPTRAKRSIRAPRHTDMPKTK 111
 RESULT 8
 IGF1_HUMAN STANDARD; PRT; 153 AA.
 AC P01343
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 13-AUG-1987 (Rel. 05, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin C).
 GN IGF1 OR IBP1.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC MEDLINE=86168194; PubMed=2937782;
 RA Rotwein P., Pollock K.M., Didier D.K., Krivi G.G.;
 RT "Organization and sequence of the human insulin-like growth factor I
 RT gene. Alternative RNA processing produces two insulin-like growth
 RT factor I precursor peptides";
 RL J. Biol. Chem. 261:4828-4832(1986).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC MEDLINE=84068210; PubMed=6358902;
 RA Jensen M., van Schaik F.M.A., Ricker A.T., Bullock B., Woods D.E.,
 RA Gabbay K.H., Nussbaum A.L., Suseenbach J.S., van den Brande J.L.;
 RT "Sequence of cDNA encoding human insulin-like growth factor I
 RT precursor";
 RL Nature 306:609-611(1983).
 RN [3]
 RP SEQUENCE FROM N.A.
 RC MEDLINE=66108910; PubMed=2935423;
 RA le Bouc Y., Dreyer D., Jaeger F., Binoux M., Sondermeier P.;
 RT "Complete characterization of the human IGF-I nucleotide sequence
 RT isolated from a newly constructed adult liver cDNA library";
 RL FEBS Lett. 196:108-112(1986).
 RN [4]
 RP SEQUENCE FROM N.A.
 RC MEDLINE=66108862; PubMed=3002851;
 RA de Pagter-Holthuisen P., van Schaik F.M.A., Verdult G.M.,
 RA van Ommen G.J.B., Bouma B.N., Jansen M., Suseenbach J.S.;

RL J. Biol. Chem. 262:7894-7900(1987).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Testis;
 RX MEDLINE=88003970; PubMed=3652906;
 RA Casella S.J., Smith E.P., van Wyk J.J., Joseph D.R., Hynes M.A.,
 RT Hoyt E.C., Lund P.K.;
 RT "Isolation of rat testis cDNAs encoding an insulin-like growth factor
 RT I precursor";
 RT DNA 6:325-330(1987).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=91103966; PubMed=1368571;
 RA Kato H., Okoshi A., Miura Y., Noguchi T.;
 RT "A new cDNA clone relating to larger molecular species of rat
 RT insulin-like growth factor-I mRNA";
 RL Agric. Biol. Chem. 54:1599-1601(1990).
 RN [4]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=89127259; PubMed=3221878;
 RA Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Lerolth D.;
 RT "Structure of the rat insulin-like growth factor II transcriptional
 RT unit: heterogeneous transcripts are generated from two promoters by
 RT use of multiple polyadenylation sites and differential ribonucleic
 RT acid splicing";
 RL Mol. Endocrinol. 2:1115-1126(1988).
 RN [5]
 RP SEQUENCE OF 46-153 FROM N.A.
 RX MEDLINE=87246437; PubMed=3595538;
 RA Murphy L.J., Bell G.I., Duckworth M.L., Friesen H.G.;
 RT "Identification, characterization, and regulation of a rat
 RT complementary deoxyribonucleic acid which encodes insulin-like growth
 RT factor-I";
 RL Endocrinology 121:684-691(1987).
 RN [6]
 RP SEQUENCE OF 49-118
 RX MEDLINE=89174609; PubMed=2538424;
 RA Tamura K., Kobayashi M., Ishi Y., Tamura T., Hashimoto K.,
 RA Nakamura S., Nawa M., Zapf J.;
 RT "Primary structure of rat insulin-like growth factor-I and its
 RT biological activities";
 RL J. Biol. Chem. 264:5616-5621(1989).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- ALTERNATIVE PRODUCTS:
 CC Event=Alternative splicing; Named isoforms=2;
 CC Name=IGF-1A;
 CC IsoId=P08025-1; Sequence=Displayed;
 CC Name=IGF-1B;
 CC IsoId=P08024-1; Sequence=External;
 CC -1- SIMILARITY: Belongs to the insulin family.
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 CC -----
 DR EMBL; X06043; CAA28436.1; -;
 DR EMBL; M15651; AAA41215.1; -;
 DR EMBL; M15647; AAA41215.1; JOINED.
 DR EMBL; M15648; AAA41215.1; JOINED.
 DR EMBL; M15649; AAA41215.1; JOINED.
 DR EMBL; M17714; AAA41227.1; -;
 DR EMBL; M17735; AAA41386.1; ALT_INIT.
 DR EMBL; M15481; AAA41387.1; ALT_INIT.
 DR PIR; B27804; B27804.
 DR HSSP; P01343; IGF1.
 DR InterPro; IPR004825; Ins/IGF/relax.

DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
 FT SIGNAL 1 ? ?
 FT PROPEP 49 48
 FT CHAIN 49 118
 FT DOMAIN 78 77
 FT DOMAIN 49 89
 FT DOMAIN 90 110
 FT DOMAIN 111 118
 FT DOMAIN 119 153
 FT PROPEP 54 96
 FT DISULFID 66 109
 FT DISULFID 95 100
 FT DISULFID 110 112
 FT CONFLIT 110 112
 SQ SEQUENCE 153 AA; 17079 MW; 966F3C0FAEB3DE7 CRC64;
 APL -> VRC (IN REF. 4).
 BY SIMILARITY.
 BY SIMILARITY.
 BY SIMILARITY.

Query Match 74.0%; Score 443; DB 1; Length 153;
 Best Local Similarity 95.3%; Pred. No. 3.9e-41;
 Matches 82; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 1 GPEFLCGAEIVDAIQFCGPRGPFYFNKPTTYGSSIRAPQGTIVDECCFSSCDLRLEMY 60
 DB 49 GPEFLCGAEIVDAIQFCGPRGPFYFNKPTGYSSIRAPQGTIVDECCFSSCDLRLEMY 108
 QY 61 CVRCKPTKSARSIRARSHIDMPKTK 86
 DB 109 CAPLKPTKSARSIRARSHIDMPKTK 134

RESULT 6
 IGF1_MOUSE STANDARD; PRT; 127 AA.
 AC P05017;
 DT 13-AUG-1987 (Rel. 05, Created)
 DT 13-AUG-1987 (Rel. 05, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor IA precursor (IGF-1A) (Somatomedin).
 GN IGF1 OR IGF-1.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_Taxid=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=87040760; PubMed=3774549;
 RA Bell G.I., Stempien M.M., Fong N.M., Rall L.B.;
 RT "Sequences of liver cDNAs encoding two different mouse insulin-like
 RT Nucleic Acids Res. 14:7873-7882(1986).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- ALTERNATIVE PRODUCTS:
 CC Event=Alternative splicing; Named isoforms=2;
 CC Name=IGF-1A;
 CC IsoId=P05017-1; Sequence=Displayed;
 CC Name=IGF-1B;
 CC IsoId=P05018-1; Sequence=External;
 CC -1- SIMILARITY: Belongs to the insulin family.
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 CC -----

RA Cooke R.M., Harvey T.S., Campbell I.D.;
 RT "Solution structure of human insulin-like growth factor I: a nuclear
 RT magnetic resonance and restrained molecular dynamics study.";
 RL Biochemistry 30:5484-5491(1991).
 RN [8]
 RP STRUCTURE BY NMR
 RX MEDLINE=92316903; PubMed=1319992;
 RA Sato A., Nishimura S., Ohkubo T., Kyogoku Y., Koyama S., Kobayashi M.,
 RA Yasuda T., Kobayashi Y.;
 RT "1H-NMR assignment and secondary structure of human insulin-like
 RT growth factor-I (IGF-I) in solution.";
 RL J. Biochem. 111:529-536(1992).
 RN [9]
 RP DISULFIDE BONDS
 RX MEDLINE=89207850; PubMed=3242681;
 RA Raschdorf F., Dahinden R., Maerkl W., Richter M.U., Merryweather J.P.;
 RT "Location of disulphide bonds in human insulin-like growth factors
 RT (IGFs) synthesized by recombinant DNA technology.";
 RL Biomed. Environ. Mass Spectrom. 16:3-8(1988).
 RN [10]
 RP VARIANT ASP-187
 RX MEDLINE=99318093; PubMed=10391209;
 RA Cargill M., Altschuler D., Ireland J., Sklar P., Ardlie K., Patil N.,
 RA Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L.,
 RA Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.O.,
 RA Lander E.S.;
 RT "Characterization of single-nucleotide polymorphisms in coding regions
 RT of human genes.";
 RL Nat. Genet. 22:231-238(1999).
 RN [11]
 RP ERRATUM
 RA Cargill M., Altschuler D., Ireland J., Sklar P., Ardlie K., Patil N.,
 RA Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L.,
 RA Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.O.,
 RA Lander E.S.;
 RT "Genet. 23:373-373(1999)."
 RL Nat. Genet. 23:373-373(1999).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- ALTERNATIVE PRODUCTS:
 CC Event=Alternative splicing; Named isoforms=2;
 CC Name=IGF-1B;
 CC IsoId=PO5019-1; Sequence=Displayed;
 CC Name=IGF-1A;
 CC IsoId=PO1343-1; Sequence=External;
 CC -1- SIMILARITY: Belongs to the insulin family.
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 CC -----
 DR EMBL; M14155; AAAS2537.1; -;
 DR EMBL; M12659; AAAS2537.1; JOINED.
 DR EMBL; M14153; AAAS2537.1; JOINED.
 DR EMBL; M14154; AAAS2537.1; JOINED.
 DR EMBL; M11568; AAAS2539.1; -;
 DR EMBL; X03563; CAA27250.1; ALT_SEQ.
 DR EMBL; X03420; CAA27152.1; -;
 DR EMBL; X03421; CAA27153.1; -;
 DR EMBL; X03422; CAA27154.1; -;
 DR PIR; A01611; IGHU1B.
 DR PDB; 1GF1; 15-OCT-94.
 DR PDB; 2GF1; 15-APR-93.
 DR PDB; 3GF1; 15-APR-93.
 DR PDB; 1BCT; 18-MAY-99.
 DR Genew; HGNC:5464; IGF1.
 DR MIM; 147440; -;
 DR MIM; 265850; -;

DR GO; GO:0005159; F:insulin-like growth factor receptor binding; TAS.
 DR GO; GO:0005180; F:peptide hormone; TAS.
 DR GO; GO:0006928; F:cell motility; TAS.
 DR GO; GO:0006260; P:DNA replication; TAS.
 DR GO; GO:0009441; P:glycolate metabolism; TAS.
 DR GO; GO:0007517; P:muscle development; TAS.
 DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
 DR GO; GO:0007265; P:RAS protein signal transduction; TAS.
 DR GO; GO:0007165; P:signal transduction; TAS.
 DR GO; GO:0001501; P:skeletal development; TAS.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; 3D-structure; Plasma;
 KW Alternative splicing; Signal; Polymorphism.
 FT SIGNAL 1 21
 FT PROPEP 22 48
 FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR 1B.
 FT DOMAIN 49 77 B.
 FT DOMAIN 78 89 C.
 FT DOMAIN 90 110 A.
 FT DOMAIN 111 118 D.
 FT PROPEP 119 195 E. PEPTIDE.
 FT DISULFID 54 96
 FT DISULFID 66 109
 FT DISULFID 95 100
 FT VARIANT 187 187 A -> D (in dbSNP:6213).
 FT STRAND 51 51 /FTID=VAR_013945.
 FT TURN 55 55
 FT HELIX 56 69
 FT TURN 87 88
 FT HELIX 91 95
 FT TURN 96 97
 FT STRAND 99 99
 FT HELIX 106 109
 FT SEQUENCE 195 AA; 21841 MW; E88A8CFBD1CD1873 CRC64;
 SQ
 Query Match 77.5%; Score 464; DB 1; Length 195;
 Best Local Similarity 85.3%; Pred. No. 2.7e-43;
 Matches 87; Conservative 3; Mismatches 12; Indels 0; Gaps 0;
 QY 1 GPEITCGAELVDALQFVCGPPRGFFYFNKPTVYSSSTRRAPOGTIVDECCFRSCDLRLMY 60
 DB 49 GPEITCGAELVDALQFVCGPPRGFFYFNKPTVYSSSTRRAPOGTIVDECCFRSCDLRLMY 108
 QY 61 CVRCCKTKSARSTRAORHTDMPKTSQPSLTHKKRKQORR 102
 DB 109 CAPLRKAKRSARSTRAORHTDMPKTSQPSLTHKKRKQORR 150
 RESULT 5
 ID IGF1 RAT STANDARD; PRT; 153 AA.
 AC P08025;
 DT 01-AUG-1988 (Rel. 08, Created)
 DT 01-FEB-1991 (Rel. 17, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor IA precursor (IGF-1A) (Somatomedin).
 GN IGF1 OR IGF-1.
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 OC NCBI_TaxID=10116;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=87222423; PubMed=3034909;
 RA Shimatsu A., Rotwein P.;
 RT "Mosaic evolution of the insulin-like growth factors. Organization,
 RT sequence, and expression of the rat insulin-like growth factor I
 RT gene.";

QY 61 CVCCKPTKASRSIRACRHTDMPKTKSQPLSTHKRKLORRRKGSST 106
 DB 109 CAPLKPTKASRSIRACRHTDMPKTKSQPLSTHKRKLORRRKGSST 154

RESULT 3
 IGF1_RABIT STANDARD; PRT; 143 AA.
 ID IGF1_RABIT STANDARD; PRT; 143 AA.
 AC Q95222; O18846;
 DT 01-NOV-1997 (Rel. 35, Created)
 DT 16-OCT-2001 (Rel. 40, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
 GN IGF1 OR IGF-1.
 OS Oryctolagus cuniculus (Rabbit).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
 OC NCBI_TaxID=9986;
 RN [1]
 RP SEQUENCE FROM N.A. (ISOFORM IGF-1A).
 RC STRAIN=ZIKX;
 RA Flekna G., Brem G., Mueller M.;
 RL Submitted (NOV-1996) to the EMBL/GenBank/DBJ databases.
 RN [2]
 RP SEQUENCE FROM N.A. (ISOFORM IGF-1B).
 RC STRAIN=ZIKX; TISSUE=Liver;
 RA Flekna G., Brem G., Mueller M.;
 RL Submitted (SEP-1997) to the EMBL/GenBank/DBJ databases.
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- ALTERNATIVE PRODUCTS:
 CC Event=Alternative splicing; Named isoforms=2;
 CC Name=IGF-1B;
 CC IsoId=Q95222-1; Sequence=Displayed;
 CC Name=IGF-1A;
 CC IsoId=Q95222-2; Sequence=VSP_002705;
 CC -1- SIMILARITY: Belongs to the insulin family.

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 CC or send an email to license@isb-sib.ch).

CC -----
 DR EMBL; U75390; AAB48032.1; -;
 DR EMBL; AF022961; AAB80950.1; -;
 DR HSSP; P01343; IGF1.
 DR InterPro; IPRO04825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 DR Insulin family; Growth factor; Plasma; Signal; Alternative splicing.
 DR KX INSULIN family; Growth factor; Plasma; Signal; Alternative splicing.
 FT CHAIN 1 32
 FT SIGNAL 1 32
 FT PROPEP 103 143
 FT DOMAIN 33 61
 FT DOMAIN 62 73
 FT DOMAIN 74 94
 FT DOMAIN 95 102
 FT DISULFID 38 80
 FT DISULFID 50 93
 FT DISULFID 79 84
 FT VARSPLIC 119 143
 FT GSKNRYRM (in isoform IGF-1A).
 FT /FTId=VSP_002705.
 FT SEQUENCE 143 AA; 16091 MW; 819AF577800A1B1A CRC64;

Query Match 85.5%; Score 512; DB 1; Length 143;
 Best Local Similarity 86.5%; Pred. No. 1.1e-48;
 Matches 96; Conservative 3; Mismatches 12; Indels 0; Gaps 0;

QY 1 GPFITGCAELVDALQVCGPGRGFYFNKPITYGSSIRAPQTGIYDECCFSCDLRLIEMV 60
 DB 33 GPFITGCAELVDALQVCGPGRGFYFNKPITYGSSIRAPQTGIYDECCFSCDLRLIEMV 92

QY 61 CVCCKPTKASRSIRACRHTDMPKTKSQPLSTHKRKLORRRKGSSTLEERK 111
 DB 93 CAPLKPTKASRSIRACRHTDMPKTKSQPLSTHKRKLORRRKGSSTLEERK 143

RESULT 4
 IGF1_HUMAN STANDARD; PRT; 195 AA.
 ID IGF1_HUMAN STANDARD; PRT; 195 AA.
 AC P05019;
 DT 13-AUG-1987 (Rel. 05, Created)
 DT 13-AUG-1987 (Rel. 05, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-1B) (Somatomedin C).
 GN IGF1 OR IBPL.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.
 OC NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC MEDLINE=86168194; PubMed=2937782;
 RA Rotwein P., Pollock K.M., Didier D.K., Krivi G.G.;
 RL "Organization and sequence of the human insulin-like growth factor I
 RL gene. Alternative RNA processing produces two insulin-like growth
 RL factor I precursor peptides.";
 RL J. Biol. Chem. 261:4828-4832(1986).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC MEDLINE=86094355; PubMed=3455760;
 RA Rotwein P.;
 RL "Two insulin-like growth factor I messenger RNAs are expressed in
 RL human liver.";
 RL Proc. Natl. Acad. Sci. U.S.A. 83:77-81(1986).
 RN [3]
 RP SEQUENCE FROM N.A.
 RC MEDLINE=86108862; PubMed=3002851;
 RA van Ommen G.J.B., Bouma B.N., Jansen M., Sussenbach J.S.;
 RL "Organization of the human genes for insulin-like growth factors I
 RL and II.";
 RL FEBS Lett. 195:179-184(1986).
 RN [4]
 RP SEQUENCE OF 22-50 FROM N.A.
 RC MEDLINE=84295593; PubMed=6382022;
 RA Dull T.J., Gray A., Hayflick J.S., Ulrich A.;
 RL "Insulin-like growth factor II precursor gene organization in
 RL relation to insulin gene family.";
 RL Nature 310:777-781(1984).
 RN [5]
 RP SEQUENCE OF 49-118.
 RC MEDLINE=78130171; PubMed=632300;
 RA Rinderknecht E., Humbel R.E.;
 RL "The amino acid sequence of human insulin-like growth factor I and
 RL its structural homology with proinsulin.";
 RL J. Biol. Chem. 253:2769-2776(1978).
 RN [6]
 RP 3D-STRUCTURE MODELING.
 RC MEDLINE=83210259; PubMed=6189745;
 RA Blundell T.L., Bedarkar S., Humbel R.E.;
 RL "Tertiary structures, receptor binding, and antigenicity of
 RL insulinlike growth factors.";
 RL Fed. Proc. 42:2592-2597(1983).
 RN [7]
 RP STRUCTURE BY NMR.
 RC MEDLINE=91242464; PubMed=2036417;

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CC -----
DR EMBL; X04482; CAA28170.1; -
DR EMBL; BC012409; AAI12409.1; -
DR HSSP; P01343; IGF1.
DR MGP; MGI.96432; IGF1.
DR GO; GO:0010001; P:glial cell differentiation; IMP.
DR GO; GO:0007399; P:neurogenesis; IMP.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; I.
DR PRINTS; PR00277; INSULIN; I.
DR SMART; SM00078; IGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
DR SIGNAL family; Growth factor; Plasma; Alternative splicing; Signal.
FT SIGNAL 1 22
FT CHAIN 1 22
FT DOMAIN 23 51
FT DOMAIN 52 63
FT DOMAIN 64 84
FT DOMAIN 85 92
FT PROPEP 93 133
FT DISULFID 28 70
FT DISULFID 40 83
FT DISULFID 69 74
SQ SEQUENCE 133 AA; 14915 MW; 885C0588862502 CRC64;

Query Match 89.6%; Score 537; DB 1; Length 133;
Best Local Similarity 91.0%; Pred. No. 2e-51;
Matches 101; Conservative 2; Mismatches 8; Indels 0; Gaps 0;

Cy 1 GPEITLGAELVDALQFVCGPRGFYFNKPTVYVSSIRAPQGTIVDECCFRSCDRLRLMY 60
Db 23 GPEITLGAELVDALQFVCGPRGFYFNKPTVYVSSIRAPQGTIVDECCFRSCDRLRLMY 82

Cy 61 CVRCPEPTASARSIRAPQHTDMPKQKQSPSTHKKRKLQRRKSGSTLEEHK 111
Db 83 CAPLKPFAARSIRAPQHTDMPKQKQSPSTHKKRKLQRRKSGSTLEEHK 133

RESULT 2
IGFB_RAT STANDARD; PRT; 181 AA.
AC P08024;
DT 01-AUG-1988 (Rel. 08, Created)
DT 01-FEB-1991 (Rel. 17, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin).
GN IGF1 OR IGF-1.
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=8722423; PubMed=3034909;
RA Shimatsu A., Rotwein P.;
RT "Mosaic evolution of the insulin-like growth factors. Organization,
RT sequence, and expression of the rat insulin-like growth factor I
RT gene.";
RL J. Biol. Chem. 262:7894-7900 (1987).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE=8801572; PubMed=3658684;
RA Shimatsu A., Rotwein P.;
RT "Sequence of two rat insulin-like growth factor I mRNAs differing
RT within the 5' untranslated region.";

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```

RL Nucleic Acids Res. 15:7196-7196 (1987).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE=89127259; PubMed=3221878;
RA Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Letoith D.;
RT "Structure of the rat insulin-like growth factor II transcriptional
RT unit: heterogeneous transcripts are generated from two promoters by
RT use of multiple polyadenylation sites and differential ribonucleic
RT acid splicing.";
RL Mol. Endocrinol. 2:1115-1126 (1988).
RN [4]
RP SEQUENCE OF 49-118.
RX MEDLINE=89174609; PubMed=2538424;
RA Tamura K., Kobayashi M., Ishii Y., Tamura T., Hashimoto K.,
RA Nakamura S., Niwa M., Zapf J.;
RT "Primary structure of rat insulin-like growth factor-I and its
RT biological activities.";
RL J. Biol. Chem. 264:5616-5621 (1989).
CC - FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC - SUBCELLULAR LOCATION: Secreted.
CC - ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=2;
CC Name=IGF-IB;
CC IsoId=P08024-1; Sequence=Displayed;
CC Name=IGF-1A;
CC IsoId=P08025-1; Sequence=External;
CC - SIMILARITY: Belongs to the insulin family.
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CC -----
DR EMBL; M15650; AAA41214.1; -
DR EMBL; M15647; AAA41214.1; JOINED.
DR EMBL; M15648; AAA41214.1; JOINED.
DR EMBL; M15649; AAA41214.1; JOINED.
DR EMBL; X06107; CAA29480.1; ALT_SEQ.
DR EMBL; M15480; AAA41385.1; ALT_SEQ.
DR PIR; A27804; A27804.
DR HSSP; P01343; IGF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULIN; I.
DR SMART; SM00078; IGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
DR SIGNAL family; Growth factor; Plasma; Alternative splicing; Signal.
FT SIGNAL 1 2
FT PROPEP 2 48
FT CHAIN 49 118
FT DOMAIN 49 77
FT DOMAIN 78 89
FT DOMAIN 90 110
FT DOMAIN 111 118
FT PROPEP 119 181
FT DISULFID 54 96
FT DISULFID 66 109
FT DISULFID 95 100
FT CONFLICT 110 112
SQ SEQUENCE 181 AA; 20322 MW; 52BBA431875A1A06 CRC64;

Query Match 89.5%; Score 536; DB 1; Length 181;
Best Local Similarity 94.3%; Pred. No. 3.7e-51;
Matches 100; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Cy 1 GPEITLGAELVDALQFVCGPRGFYFNKPTVYVSSIRAPQGTIVDECCFRSCDRLRLMY 60
Db 49 GPEITLGAELVDALQFVCGPRGFYFNKPTVYVSSIRAPQGTIVDECCFRSCDRLRLMY 108

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 3, 2004, 07:50:54 ; Search time 8.0241 Seconds

(without alignments)
720.304 Million cell updates/sec

Title: US-09-852-261-4

Perfect score: 599

Sequence: 1 GPETLGGALVDALQFVCGP.....THKRRKLRGRRKSTLEERK 111

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 141681 seqs, 52070155 residues

Total number of hits satisfying chosen parameters: 141681

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Database : SwissProt_42.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | Query Match Length | ID | Description |
|------------|-------|--------------------|-------|-------------|
| 1 | 537 | 89.6 | 133 1 | IGFB_MOUSE |
| 2 | 536 | 89.5 | 181 1 | IGFB_RAT |
| 3 | 512 | 85.5 | 143 1 | IGFB_RABIT |
| 4 | 464 | 77.5 | 195 1 | IGFB_HUMAN |
| 5 | 443 | 74.0 | 153 1 | IGFA_RAT |
| 6 | 440 | 73.5 | 127 1 | IGFA_MOUSE |
| 7 | 423 | 70.6 | 130 1 | IGFA_MOUSE |
| 8 | 423 | 70.6 | 153 1 | IGFA_HUMAN |
| 9 | 423 | 70.6 | 154 1 | IGFA_MOUSE |
| 10 | 418 | 69.8 | 122 1 | IGF1_CANFA |
| 11 | 418 | 69.8 | 153 1 | IGF1_PIG |
| 12 | 418 | 69.8 | 154 1 | IGF1_BOVIN |
| 13 | 410 | 68.4 | 154 1 | IGF1_SHEEP |
| 14 | 384 | 64.1 | 124 1 | IGF1_CHICK |
| 15 | 384 | 64.1 | 153 1 | IGF1_MOUSE |
| 16 | 376.5 | 62.9 | 153 1 | IGF1_XENTLA |
| 17 | 369 | 61.6 | 81 1 | IGF1_SUNMU |
| 18 | 362 | 60.4 | 161 1 | IGF1_CYPCA |
| 19 | 362 | 60.4 | 161 1 | IGF1_CYPCA |
| 20 | 361 | 60.3 | 176 1 | IGF1_ONCKI |
| 21 | 359 | 59.9 | 176 1 | IGF1_ONCKI |
| 22 | 358 | 59.8 | 176 1 | IGF1_ONCKI |
| 23 | 349 | 41.6 | 122 1 | IGF1_HORSE |
| 24 | 333 | 38.7 | 155 1 | IGF2_BOVIN |
| 25 | 323 | 38.7 | 179 1 | IGF2_SHEEP |
| 26 | 324 | 37.4 | 181 1 | IGF2_HORSE |
| 27 | 323 | 37.2 | 139 1 | IGF2_MYXGL |
| 28 | 322 | 37.1 | 181 1 | IGF2_PIG |
| 29 | 221.5 | 36.9 | 129 1 | IGF2_MOUSE |
| 30 | 221 | 36.9 | 180 1 | IGF2_HUMAN |
| 31 | 216 | 36.1 | 128 1 | IGF2_MOUSE |
| 32 | 212 | 35.4 | 180 1 | IGF2_MOUSE |
| 33 | 209.5 | 35.0 | 180 1 | IGF2_MOUSE |

| | | | | |
|----|-------|------|------|------------|
| 34 | 203 | 33.9 | 66 1 | IGF2_CHICK |
| 35 | 152.5 | 25.5 | 50 1 | INS_MYOC |
| 36 | 151.5 | 25.3 | 51 1 | INS_GADCA |
| 37 | 150 | 25.0 | 59 1 | INS_HYDO |
| 38 | 148.5 | 24.8 | 51 1 | INS2_BATSP |
| 39 | 147 | 24.5 | 50 1 | INS2_BATSP |
| 40 | 146 | 24.4 | 51 1 | INS_ZAODH |
| 41 | 145 | 24.2 | 51 1 | INS_ALMT |
| 42 | 143 | 23.9 | 51 1 | INS_ANSAN |
| 43 | 143 | 23.9 | 51 1 | INS_CROAT |
| 44 | 142 | 23.7 | 51 1 | INS_CHIR |
| 45 | 142 | 23.7 | 51 1 | INS_TRASC |

ALIGNMENTS

RESULT 1
IGFB_MOUSE STANDARD, PRT, 133 AA.
AC P05018:
13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 15-MAR-2004 (Rel. 43, Last annotation update)
DE Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin).
GN IGF1 OR IGF-1.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=87040760; PubMed=3774549;
RA Bell G.I., Stempfen M.M., Fong N.M., Rall L.B.;
RT "Sequences of liver cDNAs encoding two different mouse insulin-like
RT growth factor I precursors."
RL Nucleic Acids Res. 14:7873-7882(1986).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=FVB/N; TISSUE=Liver;
RX MEDLINE=22388257; PubMed=1247932;
RA Strussberg R.L., Reinsold B.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Hopfisch R.F., Zeeberg B., Butow K.H., Schaefer C.F., Bhat N.K.,
RA Aleschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hopkins R.F., Sodergren E.J., Lu X., Gibbs R.A.,
RA Diachenko L., Marston K., Farmer A.A., Rubin G.M., Hong L.,
RA Stappleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Ueda T.B., Toshiyuki S., Carninci P., Prange C.J.,
RA Rana S.S., Loquellano N.A., Peters G.J., Adamson R.D., Mullany S.J.,
RA Boek S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Villalobos D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahy J., Helton E., Kettelman M., Madan A.C., Rodriguez S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butlerfield Y.S.N., Krzywicki M.I., Skalska U., Smallus D.E.,
RA Schercher A., Schein J.E., Jones S.J.M., Matra M.A.;
RT "Genetic and initial analysis of more than 15,000 full-length
RT human and mouse cDNA sequences."
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RI -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
RI are structurally and functionally related to insulin but have a
RI much higher growth-promoting activity.
RI -1- SUBCELLULAR LOCATION: Secreted.
RI -1- ALTERNATIVE PRODUCTS:
RI Event=Alternative splicing; Named isoforms=2;
RI Name=IGF-1B;
RI isoId=P05018-1; Sequence=Displayed;
RI Name=IGF-1A;
RI isoId=P05017-1; Sequence=External;
RI -1- SIMILARITY: Belongs to the insulin family.

RP SEQUENCE FROM N.A.
 RA Kavanan V.M., Koval A.P., Grebenjuk V.A., Chan S.J., Steiner D.F.,
 RT Roberts C.T.Jr., Lerioth D.;
 RL "Structure of the Chum Salmon Insulin-Like Growth Factor I Gene.";
 RN DNA Cell Biol. 11:729-737(1993).
 [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=84296559; PubMed=8024699;
 RA Kavanan V.M., Grebenjuk V.A., Koval A.P., Skorokhod A.S.,
 RT Roberts C.T.Jr., Lerioth D.;
 RL "Isolation of a second nonallelic insulin-like growth factor I gene
 from the salmon genome.";
 RN DNA Cell Biol. 13:555-559(1994).
 [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=55032736;
 RA Koval A., Kulik V., Duguey S., Plisetkaya E., Adamo M.L.,
 RT Roberts C.T.Jr., Lerioth D., Kavanan V.;
 RL "Characterization of a salmon insulin-like growth factor I promoter.";
 RN DNA Cell Biol. 13:1057-1062(1994).
 [4]
 RP SEQUENCE FROM N.A.
 RA Grebenjuk V.A., Skorokhod A.S., Anoprienko O.V., Koval A.P.;
 RL Submitted (Mar-1998) to the EMBL/GenBank/DBJ databases.
 CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; AF063216; AAC1883.1; -.
 DR HSSP; P01343; 2GF1.
 DR GO; GO:0005876; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; F:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PRO0277; INSULIN.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 SQ SEQUENCE 188 AA; 20792 MW; F4CEB6D05B0F24B8 CRC64;

Query Match 60.3%; Score 361; DB 13; Length 188;
 Best Local Similarity 67.3%; Pred. No. 4.7e-35;
 Matches 68; Conservative 9; Mismatches 24; Indels 0; Gaps 0;

QY 1 GPEITLGAELVPAALQVCGPRGTFYFNKPTVYGGSTIRAPQTGIVDCCFRSCDLRLRLMY 60
 DB 45 GPEITLGAELVPAALQVCGPRGTFYFNKPTVYGGSTIRAPQTGIVDCCFRSCDLRLRLMY 104
 QY 61 CVRCKPTKSARSISRAQHTDMPKTKSQPLSTHKRKLQRR 101
 DB 105 CAPVSGKARASVRAQRHTDMPRTPKISTAVQNVDRGTER 145

Search completed: March 3, 2004, 07:55:28
 Job time : 33.4337 secs

SQ SEQUENCE 178 AA; 19687 MW; 7075A34FF379C6459 CRC64;
 Query Match 60.4%; Score 362; DB 13; Length 178;
 Best Local Similarity 62.7%; Pred. No. 3.4e-35;
 Matches 69; Conservative 13; Mismatches 24; Indels 4; Gaps 1;

QY 1 GPEITLGAELVDALQVCGPRGPFYFNKPTVYSSIRAPQGTGIVDECCFRSCDLRLLEY 60
 DB 62 GPEITLGAELVDLTQVCGDRGPFYFNKPTVYSSIRAPQGTGIVDECCFRSCDLRLLEY 121

QY 61 CVRCKPTKSARSIRAGHTDMPKTXQ---SQPLSTHKKKKQRRKXST 106
 DB 122 CAPVKRGKTPRSVRAQRHTDMPKTXQ---SQPLSTHKKKKQRRKXST 171

RESULT 13
 Q91475 PRELIMINARY; PRT; 145 AA.
 AC Q91475;
 DT 01-NOV-1996 (TREMBlrel. 01, Created)
 DT 01-NOV-1996 (TREMBlrel. 01, Last sequence update)
 DE Insulin-2003 (TREMBlrel. 24, Last annotation update)
 DE Insulin-like growth factor I precursor (Fragment).
 OS Salmo salar (Atlantic salmon).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
 CC Proactinopterygii; Salmoniformes; Salmonidae; Salmo.
 NCBI_TaxID=8030;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=93024477; PubMed=1406698;
 RA Duguay S.J., Park L.K., Samadpour M., Dickhoff W.W.;
 RT "Nucleotide sequence and tissue distribution of three insulin-like
 growth factor I prohormones in salmon."
 RL Mol. Endocrinol. 6:1202-1210(1992).
 CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; M81904; AAA18211.1; -.
 DR HSSP; P01343; 2GF1.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; P:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Signal
 FT NON_TER 1
 FT SIGNAL 1
 FT CHAIN 19
 FT NON_TER 145
 SQ SEQUENCE 145 AA; 15885 MW; 3D94EDF477268FC4 CRC64;

Query Match 60.3%; Score 361; DB 13; Length 145;
 Best Local Similarity 67.3%; Pred. No. 3.6e-35;
 Matches 68; Conservative 9; Mismatches 24; Indels 0; Gaps 0;

DT 01-NOV-1996 (TREMBlrel. 01, Last sequence update)
 DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
 DE Insulin-like growth factor I precursor (Fragment).
 OS Oncorhynchus kisutch (Coho salmon).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
 CC Proactinopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
 NCBI_TaxID=8019;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=90190659; PubMed=2628735;
 RA Cao Q.P., Duguay S.J., Plisetkaya E., Steiner D.F., Chan S.J.;
 RT "Nucleotide sequence and growth hormone regulated expression of salmon
 insulin-like growth factor I mRNA."
 RL Mol. Endocrinol. 3:2005-2010(1989).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=93024477; PubMed=1406698;
 RA Duguay S.J., Park L.K., Samadpour M., Dickhoff W.W.;
 RT "Nucleotide sequence and tissue distribution of three insulin-like
 growth factor I prohormones in salmon."
 RL Mol. Endocrinol. 6:1202-1210(1992).
 CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; M81913; AAA49413.1; -.
 DR PIR; C44012; C44012.
 DR HSSP; P01343; 2GF1.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; P:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Signal
 FT NON_TER 1
 FT SIGNAL 1
 FT CHAIN 19
 FT NON_TER 145
 SQ SEQUENCE 155 AA; 16968 MW; 022PFD3CA39CA3160 CRC64;

Query Match 60.3%; Score 361; DB 13; Length 155;
 Best Local Similarity 67.3%; Pred. No. 3.8e-35;
 Matches 68; Conservative 9; Mismatches 24; Indels 0; Gaps 0;

QY 1 GPEITLGAELVDALQVCGPRGPFYFNKPTVYSSIRAPQGTGIVDECCFRSCDLRLLEY 60
 DB 19 GPEITLGAELVDLTQVCGDRGPFYFNKPTVYSSIRAPQGTGIVDECCFRSCDLRLLEY 78

QY 61 CVRCKPTKSARSIRAGHTDMPKTXQ---SQPLSTHKKKKQRRKXST 101
 DB 79 CAPVKSGKAARSVRAQRHTDMPKTXQ---SQPLSTHKKKKQRRKXST 119

RESULT 15
 P81268 PRELIMINARY; PRT; 188 AA.
 AC P81268;
 DT 01-AUG-1998 (TREMBlrel. 07, Created)
 DT 01-AUG-1998 (TREMBlrel. 07, Last sequence update)
 DE Insulin-2003 (TREMBlrel. 24, Last annotation update)
 DE Insulin-like growth factor I precursor.
 GN IGF-I.1.
 OS Oncorhynchus keta (Chum salmon).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
 CC Proactinopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
 NCBI_TaxID=8016;
 RN [1]

| ID | AC | PRELIMINARY; | PR; | 161 AA. |
|--|-------------|--|------|---------|
| Q91230; | | | | |
| DT | 01-NOV-1996 | (TEMBLrel. 01, Created) | | |
| DT | 01-NOV-1996 | (TEMBLrel. 01, Last sequence update) | | |
| DT | 01-JUN-2003 | (TEMBLrel. 24, Last annotation update) | | |
| DE | | Insulin-like growth factor-I. | | |
| GN | | IGF-I. | | |
| OS | | Oncorhynchus tshawytscha (Chinook salmon) (King salmon). | | |
| OC | | Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; | | |
| OC | | Actinopterygii; Neopterygii; Teleostei; Euteleostei; | | |
| OC | | Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus. | | |
| OK | | NCBI_TaxID=74940; | | |
| RN | | [1] | | |
| RP | | SEQUENCE FROM N.A. | | |
| RC | | STRAIN=Big Qualicum River; TISSUE=Liver; | | |
| RX | | MEDLINE=93247592; PubMed=7683374; | | |
| RA | | Wallis A.B., Devlin R.H., | | |
| RT | | "Duplicate insulin-like growth factor-I genes in salmon display | | |
| RT | | alternative splicing pathways."; | | |
| RL | | Mol. Endocrinol. 7:409-422(1993). | | |
| RN | | [2] | | |
| RP | | SEQUENCE FROM N.A. | | |
| RC | | STRAIN=Big Qualicum River; TISSUE=Liver; | | |
| RA | | Devlin R.H., | | |
| RL | | Submitted (OCT-1994) to the EMBL/GenBank/DBJ databases. | | |
| CC | | -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY). | | |
| CC | | -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY. | | |
| DR | | EMBL; U15961; AAA67267.1; - | | |
| DR | | PIR; C54270; C54270. | | |
| DR | | HSSP; P01343; 2GFI. | | |
| DR | | GO; GO:0005576; C:extracellular; IEA. | | |
| DR | | GO; GO:0005179; F:hormone activity; IEA. | | |
| DR | | GO; GO:0007582; P:physiological processes; IEA. | | |
| DR | | InterPro; IPR004825; Ins/IGF/relax. | | |
| DR | | Pfam; PF00049; Insulin; 1. | | |
| DR | | PRINTS; PR00277; INSULIN. | | |
| DR | | SMART; SM00078; IIGF; 1. | | |
| DR | | PROSITE; PS00262; INSULIN; 1. | | |
| DR | | SEQUENCE 161 AA; 17763 MW; A5A85D121377BA67 CRC64; | | |
| Query Match 60.5%; Score 362.5; DB 13; Length 161; | | | | |
| Best Local Similarity 66.4%; Pred. No.2,6e-35; | | | | |
| Matches 72; Conservative 11; Mismatches 22; Indels 3; Gaps 2 | | | | |
| QY | 1 | GPETLGAEIVDLQVYCGPRGFYENKPTVYSSLRPAQPGIGIVDECCFSCDIIRLEMY | 60 | |
| DB | 45 | GPETLGAEIVDLQVYCGPRGFYENKPTVYSSLRPAQPGIGIVDECCFSCDIIRLEMY | 104 | |
| QY | 61 | CVECKPTKARSIRAOQHTDMPKTSOPLS--THKKRLQRRRGS | 105 | |
| DB | 105 | CARVSGKKAARSYRAQHTDMPRTPK-KLSGNSHTSCKEVHQKNS | 150 | |
| RESULT 11 | | | | |
| ID | Q91476 | PRELIMINARY; | PRT; | 117 AA. |
| AC | Q91476; | | | |
| DT | 01-NOV-1996 | (TEMBLrel. 01, Created) | | |
| DT | 01-NOV-1996 | (TEMBLrel. 01, Last sequence update) | | |
| DT | 01-JUN-2003 | (TEMBLrel. 24, Last annotation update) | | |
| DE | | Insulin-like growth factor I precursor (fragment). | | |
| OS | | Salmo salar (Atlantic salmon). | | |
| OC | | Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; | | |
| OC | | Actinopterygii; Neopterygii; Teleostei; Euteleostei; | | |
| OC | | Protacanthopterygii; Salmoniformes; Salmonidae; Salmo. | | |
| OK | | NCBI_TaxID=8030; | | |
| RN | | [1] | | |
| RP | | SEQUENCE FROM N.A. | | |
| RC | | TISSUE=Liver; | | |
| RX | | MEDLINE=93024477; PubMed=1406698; | | |
| RA | | Duguay S.J., Park L.K., Samadpour M., Dickhoff W.W.; | | |
| RT | | "Nucleotide sequence and tissue distribution of three insulin-like | | |
| RT | | growth factor I prohormones in salmon."; | | |

| | | | |
|-----------------------|--|---|-------------------------------------|
| DR | Mo1. | Endocrinol. | 6;1202-1210(1992). |
| CC | -1- | SUBCELLULAR LOCATION: | SECRETED (BY SIMILARITY). |
| DR | EMBL; | M81904; | AAI8212.1; -. |
| DR | HSSP; | P01343; | ZGF1. |
| DR | GO; | GO:0005576; | C:extracellular; IEA. |
| DR | GO; | GO:0005179; | F:hormone activity; IEA. |
| DR | GO; | GO:0007582; | P:physiological processes; IEA. |
| DR | InterPro; | IPIR004825; | Ins/IGF/relex. |
| DR | Pfam; | PF00043; | Insulin; 1. |
| DR | PRINTS; | PRO0277; | INSULINB. |
| DR | SMART; | SMO0078; | IGF; 1. |
| DR | PROSITE; | PS00262; | INSULIN; 1. |
| DR | KW | Signal. | |
| FT | NON TER | 1 | 1 |
| FT | SIGNAL | <1 | 18 |
| FT | CHAIN | 19 | 88 |
| SO | SEQUENCE | 117 AA; | 12867 MW; A57666EEZEF526EAC CRC64; |
| Query Match | | | |
| Best Local Similarity | 60.4%; | Score 362; | DB 13; Length 117; |
| Matches | 69; | Conservative | 9; Mismatches 19; Indels 2; Gaps 1; |
| Oy | | | |
| Dd | | | |
| Oy | 1 | GPEFLCGAEVLVDALQVPCGPRGYFNKPYTGSSIRAPQGTGIYDECCFCRSCLIRLEMY | 60 |
| Dd | 19 | GPEFLCGAEVLVDLTFQVGGRGEFFYSPTGTGPGFSRRSHNRGIYDECCFCGCELRILEMY | 78 |
| Dd | 61 | CVRCKPTKSARSIPDQRHTMPKTKOSQPS--THKKRK | 97 |
| Dd | 79 | CAPYSGKAARSVAQNHTDMFRTPKNLYGLIVTHLRK | 117 |
| RESULT 12 | | | |
| ID B10 | | | |
| OC B10 | | | |
| AC | PRELIMINARY; | prt; | 178 aa. |
| DT | 01-OCT-2000 (TREMblrel. 15, | Created) | |
| DT | 01-OCT-2000 (TREMblrel. 15, | Last sequence update) | |
| DT | 01-OCT-2003 (TREMblrel. 25, | Last annotation update) | |
| De | Insulin-like growth factor I subtype Eaa2. | | |
| GN | IGF-IBA2 OR IGF-I. | | |
| OS | Cyprius carpio (Common carp). | | |
| OC | Eukaryote; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; | | |
| OC | Achnopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes; | | |
| OC | Cyprinidae; Cyprinus. | | |
| OX | NCBI_TaxID=7962; | | |
| RN | [1] | | |
| RP | SEQUENCE FROM N.A. | | |
| RC | TISSUE=Liver; | | |
| RX | MEDLINE=96241923; PubMed=8680527; | | |
| RA | Liang Y.H., Cheng C.H., Chan K.M.; | | |
| RT | "Insulin-like growth factor Iba2 is the predominantly expressed form | | |
| RT | of IGF in common carp (Cyprinus carpio)."; | | |
| RL | Mo1. Mar. Biol. Biotechnol. 5:145-152(1996). | | |
| RN | [2] | | |
| RP | SEQUENCE FROM N.A. | | |
| RA | Vong Q.P., Chan K.M., Cheng C.H.K.; | | |
| RT | "Common carp insulin-like growth factor-I gene: Genomic organization | | |
| RT | and functional characterization of the 5'-flanking region."; | | |
| RL | Submitted (JAN-2002) to the EMBL/GenBank/DBD databases. | | |
| CC | -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY). | | |
| CC | -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY. | | |
| DR | EMBL; | S82374; | AAB37702.2; -. |
| DR | EMBL; | A8465830; | AAP78926.1; -. |
| DR | HSSP; | P01345; | ZGF1. |
| DR | GO; | GO:0005576; | C:extracellular; IEA. |
| DR | GO; | GO:0005179; | F:hormone activity; IEA. |
| DR | GO; | GO:0007582; | P:physiological processes; IEA. |
| DR | InterPro; | IPIR004825; | Ins/IGF/relex. |
| DR | Pfam; | PF00043; | Insulin; 1. |
| DR | PRINTS; | PRO0277; | INSULINB. |
| DR | SMART; | SMO0078; | IGF; 1. |
| DR | PROSITE; | PS00262; | INSULIN; 1. |

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DR SMART; SMO0078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
FT NON_TER 1 1
SQ SEQUENCE 133 AA; 14674 MW; A6991DECB75C103B CRC64;

Query Match
Best Local Similarity 69.8%; Score 418; DB 6; Length 133;
Matches 77; Conservative 1; Mismatches 8; Indels 0; Gaps 0;

QY 1 GPEITCGALVLDALQVCGPRGFYFNKPTVYVSSIRRAPOGTIVDECCFRSCDLRLRLEY 60
DB 29 GPEITCGALVLDALQVCGDRGFYFNKPTGYGSSSRRAPOGTIVDECCFRSCDLRLRLEY 88

QY 61 CVRCKPTKSARSIRARQHTDMPKTOK 86
DB 89 CAPLKPASARSIVRAQRHTDMPKAK 114

RESULT 8
P79167 PRELIMINARY; PRT; 139 AA.
ID P79167;
AC P79167;
DT 01-MAY-1997 (TREMBLrel. 03, Created)
DT 01-OCT-2000 (TREMBLrel. 15, Last sequence update)
DT 01-JUN-2003 (TREMBLrel. 24, Last annotation update)
DE Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin C)
DE (Fragments).
GN IGF1.
OS Equus caballus (Horse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
OX NCBI_TaxID=9796;
RN [1]
RP SEQUENCE OF 1-122 FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=97013467; PubMed=8860303;
RA Ote K., Rozell B., Gessbo A., Engstrom W.;
RT "Cloning and sequencing of an equine insulin-like growth factor I cDNA
RT and its expression in fetal and adult tissues.";
RL Gen. Comp. Endocrinol. 102:11-15(1996).
RN [2]
RP SEQUENCE OF 123-139 FROM N.A.
RA Nixon A.J., Toland B.D., Sandell L.J.;
RL Submitted (JAN-1997) to the EMBL/Genbank/DBJ databases.
CC -1- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
CC ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
CC MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
CC -1- SUBCELLULAR LOCATION: SECRETED.
CC -1- ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=2;
CC Name=IGF-IB;
CC IsoId=P79167-1; Sequence=Displayed;
CC Name=IGF-IA;
CC IsoId=PS1458-1; Sequence=External;
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; U85070; AAA68952.1; -.
DR EMBL; U85071; AAA7484.1; -.
DR HSSP; P01343; 2GF1.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR PRINTS; PR00277; INSULINB.
DR SMART; SMO0078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KM Insulin family; Growth factor; Signal; Alternative splicing.
FT SIGNAL 1 48
FT PROPEP ? 48 BY SIMILARITY.
FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR IB.
FT DOMAIN 49 77 B.
FT DOMAIN 78 89 C.
FT DOMAIN 90 110 A.

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FT DOMAIN 111 118 D.
FT PROPEP 119 >139 E PEPTIDE.
FT NON_CONS 122 123
FT DISULFID 34 96 BY SIMILARITY.
FT DISULFID 66 109 BY SIMILARITY.
FT DISULFID 95 100 BY SIMILARITY.
FT NON_TER 139 139
SQ SEQUENCE 139 AA; 15612 MW; CDC0E8F19C61A2C CRC64;

Query Match
Best Local Similarity 67.1%; Score 402; DB 6; Length 139;
Matches 79; Conservative 2; Mismatches 10; Indels 12; Gaps 1;

QY 1 GPEITCGALVLDALQVCGPRGFYFNKPTVYVSSIRRAPOGTIVDECCFRSCDLRLRLEY 60
DB 49 GPEITCGALVLDALQVCGDRGFYFNKPTGYGSSSRRAPOGTIVDECCFRSCDLRLRLEY 108

QY 61 CVRCKPTKSARSIRARQHTDMPKTOKSOPLSHKKRKLQRRRK 103
DB 109 CAPLKPASARSIVRAQRHTDMPKAK-----YQPPSTYKTKLQRRRK 139

RESULT 9
O93380 PRELIMINARY; PRT; 153 AA.
ID O93380;
AC O93380;
DT 01-NOV-1998 (TREMBLrel. 08, Created)
DT 01-NOV-1998 (TREMBLrel. 08, Last sequence update)
DT 01-JUN-2003 (TREMBLrel. 24, Last annotation update)
DE Insulin-like growth factor-I precursor.
DE IGF1.
OS Meleagris gallopavo (Common turkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Meleagris.
OX NCBI_TaxID=9103;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=Big 6 ML Tom; TISSUE=Liver;
RA Czerwinski S.M., Ashwell C.M., McMurtry J.P.;
RT "Cloning of turkey insulin-like growth factor-I (IGF-I).";
RL Submitted (JUN-1998) to the EMBL/Genbank/DBJ databases.
CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; AF074980; AAC26006.1; -.
DR HSSP; P01343; 2GF1.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SMO0078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KM Signal.
FT SIGNAL 1 48
FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR-I.
SQ SEQUENCE 153 AA; 17295 MW; SAPIES8D13CT0B5 CRC64;

Query Match
Best Local Similarity 64.1%; Score 384; DB 13; Length 153;
Matches 74; Conservative 7; Mismatches 17; Indels 8; Gaps 1;

QY 1 GPEITCGALVLDALQVCGPRGFYFNKPTVYVSSIRRAPOGTIVDECCFRSCDLRLRLEY 60
DB 49 GPEITCGALVLDALQVCGDRGFYFNKPTGYGSSSRRAPOGTIVDECCFRSCDLRLRLEY 108

QY 61 CVRCKPTKSARSIRARQHTDMPKTOKSOPLSHKKRKLQRRRKST 106
DB 109 CAPLKPASARSIVRAQRHTDMPKAK-----KELHLYKXSRGNT 146

RESULT 10
O91230

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Best Local Similarity 94.2%; Pred. No. 1,3e-44;
Matches 81; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGRGFFYFNKPTVYSSIRRAPOTGIYDECCFRSCDLRLLEY 60
DB 49 GPEITCGAEIVDALQFVCGRGFFYFNKPTVYSSIRRAPOTGIYDECCFRSCDLRLLEY 108
QY 61 CVRCKPTKARSIRAPQHTDMPKTOK 86
DB 109 CAPLKPTKARSIRAPQHTDMPKTOK 134

RESULT 5
Q9NP10 PRELIMINARY; PRT; 130 AA.
AC Q9NP10;
DT 01-OCT-2000 (TREMBlrel. 15, Created)
DT 01-OCT-2000 (TREMBlrel. 15, Last sequence update)
DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
DE IGFI protein precursor.
GN IGFI.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.
OC NCBI_TaxID=9606;
[1]
SEQUENCE FROM N.A.
RX MEDLINE=8065102; PubMed=3683205;
RA Hall I.B., Scott J., Bell G.T.;
RT "Human insulin-like growth factor I and II messenger RNA: isolation of
complementary DNA and analysis of expression.";
RL Meth. Enzymol. 146:239-248 (1987).
CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL: M29644; AAA52543.1; -.
DR HSSP: P01343; 2GFI.
DR GO: GO:0005576; C:extracellular; IEA.
DR GO: GO:0005179; F:hormone activity; IEA.
DR GO: GO:0007582; P:physiological processes; IEA.
DR InterPro: IPR004825; Ins/IGF/relax.
DR Pfam: PF00049; Insulin; 1.
DR PRINTS: PR00277; INSULINB.
DR SMART: SM00078; IIGF; 1.
DR PROSITE: PS00262; INSULIN; 1.
KW Signal.
FT SIGNAL 1 25 POTENTIAL.
FT CHAIN 26 95 POTENTIAL.
SQ SEQUENCE 130 AA; 14406 MW; 970FBAACFA0352D CRC64;

Query Match 70.6%; Score 423; DB 4; Length 130;
Best Local Similarity 90.7%; Pred. No. 1.2e-42;
Matches 78; Conservative 1; Mismatches 7; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGRGFFYFNKPTVYSSIRRAPOTGIYDECCFRSCDLRLLEY 60
DB 26 GPEITCGAEIVDALQFVCGRGFFYFNKPTVYSSIRRAPOTGIYDECCFRSCDLRLLEY 85
QY 61 CVRCKPTKARSIRAPQHTDMPKTOK 86
DB 86 CAPLKPTKARSIRAPQHTDMPKTOK 111

RESULT 6
Q14620 PRELIMINARY; PRT; 137 AA.
AC Q14620;
DT 01-NOV-1996 (TREMBlrel. 01, Created)
DT 01-NOV-1996 (TREMBlrel. 01, Last sequence update)
DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
DE Insulin-like growth factor I precursor.
GN IGFI.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.
OC NCBI_TaxID=9606;
[1]
SEQUENCE FROM N.A.
RX MEDLINE=9187000; PubMed=2082190;
RA Tobin G., Yee D., Brunner N., Rotwein P.;
RT "A novel human insulin-like growth factor I messenger RNA is expressed
in normal and tumor cells.";
RL Mol. Endocrinol. 4:1914-1920 (1990).
CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL: M37484; AAA52789.1; -.
DR PIR: A36552; A36552.
DR HSSP: P01343; 2GFI.
DR GO: GO:0005576; C:extracellular; IEA.
DR GO: GO:0005179; F:hormone activity; IEA.
DR GO: GO:0007582; P:physiological processes; IEA.
DR InterPro: IPR004825; Ins/IGF/relax.
DR Pfam: PF00049; Insulin; 1.
DR PRINTS: PR00277; INSULINB.
DR SMART: SM00078; IIGF; 1.
DR PROSITE: PS00262; INSULIN; 1.
KW Signal.
FT SIGNAL 1 32 POTENTIAL.
FT CHAIN 33 137 INSULIN-LIKE GROWTH FACTOR I.
SQ SEQUENCE 137 AA; 15177 MW; BFCOD11E32AB75D CRC64;

Query Match 70.6%; Score 423; DB 4; Length 137;
Best Local Similarity 90.7%; Pred. No. 1.3e-42;
Matches 78; Conservative 1; Mismatches 7; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGRGFFYFNKPTVYSSIRRAPOTGIYDECCFRSCDLRLLEY 60
DB 33 GPEITCGAEIVDALQFVCGRGFFYFNKPTVYSSIRRAPOTGIYDECCFRSCDLRLLEY 92
QY 61 CVRCKPTKARSIRAPQHTDMPKTOK 86
DB 93 CAPLKPTKARSIRAPQHTDMPKTOK 118

RESULT 7
Q9NIC1 PRELIMINARY; PRT; 133 AA.
AC Q9NIC1;
DT 01-OCT-2000 (TREMBlrel. 15, Created)
DT 01-OCT-2000 (TREMBlrel. 15, Last sequence update)
DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
DE Insulin-like growth factor I (Fragment).
GN IGFI.
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovidae; Bovinae; Bos.
OC NCBI_TaxID=9913;
[1]
SEQUENCE FROM N.A.
RA Lien S., Karlsten A., Klemetsdal G., Vage D.I., Olseker I.,
Klungland H., Aasland M., Heringstad B., Rane U., Gomez-Raya L.;
RT "A primary screen of the bovine genome for quantitative trait loci
affecting twinning rate.";
RL Submitted (DEC-1999) to the EMBL/GenBank/DBJ databases.
CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL: AF210387; AAF72409.1; -.
DR EMBL: AF210385; AAF72409.1; JOINED.
DR EMBL: AF210386; AAF72409.1; JOINED.
DR HSSP: P01343; 2GFI.
DR GO: GO:0005576; C:extracellular; IEA.
DR GO: GO:0005179; F:hormone activity; IEA.
DR GO: GO:0007582; P:physiological processes; IEA.
DR InterPro: IPR004825; Ins/IGF/relax.
DR Pfam: PF00049; Insulin; 1.
DR PRINTS: PR00277; INSULINB.

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Db 33 GPEITCGAELVDALQVCGPRGFYFNKPTGYGSSIRRAQGTIVDECCFRSCDLRLRLEMY 92
Qy 61 CVRCCKPTKSARSIRARQHTDMPKTKSQPLSTHKRKLQRRRKG 104
Db 93 CAPLKPTKARSIRARQHTDMPKTKSQPLSTHKRKLQRRRKG 136

RESULT 2
Q13428 PRELIMINARY; PRT; 139 AA.
ID Q13429
AC Q13429;
DT 01-NOV-1996 (TREMBLrel. 01, Created)
DT 01-NOV-1996 (TREMBLrel. 01, Last sequence update)
DT 01-JUN-2003 (TREMBLrel. 24, Last annotation update)
DE Insulin-like growth factor-1 (Fragment).
GN IGF-1.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_Taxid=9606;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=95237119; PubMed=7720641;
RA Chew S.L., Lavender P., Clark A.J., Ross R.J.;
RT "An alternatively spliced human insulin-like growth factor-1
RT transcript with hepatic tissue expression that diverges away from the
RT mitogenic IBS1 peptide."
RL Endocrinology 136:1939-1944(1995).
CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; U40870; AAA96152.1; -.
DR HSSP; P01343; 2GFI.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
FT NON TER
SQ SEQUENCE 139 AA; 15611 MW; A62271872CA29DE4 CRC64;

Query Match 81.2%; Score 486.5; DB 4; Length 139;
Best Local Similarity 84.7%; Pred. No. 3.3e-50;
Matches 94; Conservative 2; Mismatches 14; Indels 1; Gaps 1;

Qy 1 GPEITCGAELVDALQVCGPRGFYFNKPTGYGSSIRRAQGTIVDECCFRSCDLRLRLEMY 60
Db 30 GPEITCGAELVDALQVCGPRGFYFNKPTGYGSSIRRAQGTIVDECCFRSCDLRLRLEMY 89

Qy 61 CVRCCKPTKSARSIRARQHTDMPKTKSQPLSTHKRKLQRRRKGSTLEENK 111
Db 90 CAPLKPTKARSIRARQHTDMPKTKSQPLSTHKRKLQRRRKGSTLEENK 139

RESULT 3
P97899 PRELIMINARY; PRT; 127 AA.
ID P97899
AC P97899;
DT 01-MAY-1997 (TREMBLrel. 03, Created)
DT 01-MAY-1997 (TREMBLrel. 03, Last sequence update)
DT 01-JUN-2003 (TREMBLrel. 24, Last annotation update)
DE Insulin-like growth factor 1.
GN Rattus sp.
OS Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX NCBI_Taxid=10118;
RN [1]
RP PARTIAL SEQUENCE FROM N.A.
RX MEDLINE=87222423; PubMed=3034909;

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RA Shimatsu A., Rotwein P.;
RT "Mosaic evolution of the insulin-like growth factors.";
RL J. Biol. Chem. 262:7894-7900(1987).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE=9103966; PubMed=1368571;
RA Kato H., Okoshi A., Mura Y., Noguchi T.;
RT "A new cDNA clone relating to larger molecular species of rat insulin-
RT like growth factor-I mRNA."
RL Agric. Biol. Chem. 54:1559-1601(1990).
CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; D00698; BAA00604.1; -.
DR HSSP; P01343; 2GFI.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
FT CHAIN 23
SQ SEQUENCE 127 AA; 14106 MW; 104E126BFCAC5B7 CRC64;

Query Match 74.0%; Score 443; DB 11; Length 127;
Best Local Similarity 95.3%; Pred. No. 4.8e-45;
Matches 82; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 1 GPEITCGAELVDALQVCGPRGFYFNKPTGYGSSIRRAQGTIVDECCFRSCDLRLRLEMY 60
Db 23 GPEITCGAELVDALQVCGPRGFYFNKPTGYGSSIRRAQGTIVDECCFRSCDLRLRLEMY 82

Qy 61 CVRCCKPTKSARSIRARQHTDMPKTK 86
Db 83 CAPLKPTKARSIRARQHTDMPKTK 108

RESULT 4
Q08CAU6 PRELIMINARY; PRT; 153 AA.
ID Q08CAU6
AC Q08CAU6;
DT 01-MAR-2003 (TREMBLrel. 23, Created)
DT 01-MAR-2003 (TREMBLrel. 23, Last sequence update)
DT 01-OCT-2003 (TREMBLrel. 25, Last annotation update)
DE Unknown EST.
GN C730016P09RIK.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_Taxid=10090;
RN [1]
RP SEQUENCE FROM N.A.
RX STRAIN=C57BL/6J; TISSUE=Cerebellum;
RX MEDLINE=22354683; PubMed=12466851;
RA The FANTOM Consortium.
RA The RIKEN Genome Exploration Research Group Phase I & II Team;
RT "Analysis of the mouse transcriptome based on functional annotation of
RT 60,770 full-length cDNAs."
RL Nature 420:563-573(2002).
DR EMBL; AK081019; BAC38117.1; -.
DR MGD; MGI:2444166; C730016P09RIK.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
SQ SEQUENCE 153 AA; 17093 MW; 967596AEAC0CA387 CRC64;

Query Match 73.5%; Score 440; DB 11; Length 153;

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 3, 2004, 07:50:54 ; Search time 33.4337 Seconds
(without alignments)
1047.520 Million cell updates/sec

Title: US-09-852-261-4

Sequence: 1 GPELTGCAELVDALQFVCGP.....THKKRLQRRKRSGLTEHK 111

Scoring table: BIOSIM62

Gapop 10.0, Gapext 0.5

Searched: 1017041 seqs, 315518202 residues

Total number of hits satisfying chosen parameters: 1017041

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Database: SPTREML_25:

1: sp_archaea:*
2: sp_bacteria:*
3: sp_fungi:*
4: sp_human:*
5: sp_invertebrate:*
6: sp_mammal:*
7: sp_thc:*
8: sp_organelle:*
9: sp_phage:*
10: sp_plant:*
11: sp_rodent:*
12: sp_virus:*
13: sp Vertebrate:*
14: sp_undefined:*
15: sp_xvirus:*
16: sp_bacteriaph:*
17: sp_archaeap:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | Query Match | Length | ID | Description |
|------------|-------|-------------|--------|----|-------------|
| 1 | 505 | 84.3 | 165 | 11 | Q8CAR0 |
| 2 | 486.5 | 81.2 | 139 | 4 | Q13429 |
| 3 | 443 | 74.0 | 127 | 11 | P97899 |
| 4 | 440 | 73.5 | 130 | 11 | Q8C4U6 |
| 5 | 423 | 70.6 | 130 | 4 | Q9NP10 |
| 6 | 423 | 70.6 | 137 | 4 | Q14620 |
| 7 | 418 | 69.8 | 133 | 6 | Q9N1C1 |
| 8 | 402 | 67.1 | 139 | 6 | P79167 |
| 9 | 384 | 64.1 | 153 | 13 | Q93380 |
| 10 | 362.5 | 60.5 | 161 | 13 | Q91230 |
| 11 | 362 | 60.4 | 117 | 13 | Q91476 |
| 12 | 361 | 60.3 | 178 | 13 | Q91B10 |
| 13 | 361 | 60.3 | 145 | 13 | Q91475 |
| 14 | 361 | 60.3 | 155 | 13 | Q91162 |
| 15 | 361 | 60.3 | 188 | 13 | P81268 |
| 16 | 361 | 60.3 | 188 | 13 | Q91965 |

| | | | | | | |
|----|-------|------|-----|----|--------|--------------------|
| 17 | 360 | 60.1 | 116 | 13 | Q91161 | Q91161 oncorhynchu |
| 18 | 360 | 60.1 | 149 | 13 | Q91231 | Q91231 oncorhynchu |
| 19 | 359 | 59.9 | 181 | 13 | Q90VV9 | Q90VV9 brachydanio |
| 20 | 355 | 59.3 | 166 | 13 | Q93527 | Q93527 paralicthy |
| 21 | 355 | 59.3 | 186 | 13 | Q800Y5 | Q800Y5 siganus gut |
| 22 | 354 | 59.1 | 186 | 13 | Q7T1A7 | Q7T1A7 perca flave |
| 23 | 351.5 | 58.7 | 185 | 13 | Q57436 | Q57436 paralicthy |
| 24 | 351 | 58.6 | 117 | 13 | Q91914 | Q91914 ctenopharyn |
| 25 | 351 | 58.6 | 159 | 13 | Q93607 | Q93607 paralicthy |
| 26 | 348 | 58.1 | 161 | 13 | Q98SR6 | Q98SR6 megalobrama |
| 27 | 348 | 58.1 | 161 | 13 | Q800D5 | Q800D5 megalobrama |
| 28 | 347 | 57.9 | 161 | 13 | Q9PMK2 | Q9PMK2 carassius a |
| 29 | 347 | 57.9 | 186 | 13 | Q9PSX5 | Q9PSX5 paralicthy |
| 30 | 345 | 57.6 | 182 | 13 | Q42289 | Q42289 paralicthy |
| 31 | 344 | 57.4 | 161 | 13 | Q9Y182 | Q9Y182 carassius a |
| 32 | 344 | 57.4 | 182 | 13 | Q73720 | Q73720 creochromis |
| 33 | 344 | 57.4 | 182 | 13 | P79824 | P79824 creochromis |
| 34 | 341 | 56.9 | 104 | 13 | Q7T107 | Q7T107 dicentrarch |
| 35 | 341 | 56.9 | 108 | 13 | Q800N0 | Q800N0 morone chry |
| 36 | 341 | 56.9 | 108 | 13 | Q800W9 | Q800W9 morone saka |
| 37 | 341 | 56.9 | 108 | 13 | Q800M8 | Q800M8 morone chry |
| 38 | 341 | 56.9 | 108 | 13 | Q800M7 | Q800M7 morone amer |
| 39 | 332.5 | 55.5 | 185 | 13 | Q9Y157 | Q9Y157 acanthopagr |
| 40 | 326 | 54.4 | 184 | 13 | Q42336 | Q42336 myoxocephal |
| 41 | 325.5 | 54.3 | 69 | 6 | Q02807 | Q02807 bubalus bub |
| 42 | 310 | 51.8 | 66 | 6 | Q9N1S6 | Q9N1S6 caprellus c |
| 43 | 279.5 | 46.7 | 126 | 13 | Q91442 | Q91442 squatus aca |
| 44 | 267 | 44.6 | 57 | 6 | Q28236 | Q28236 cervus elap |
| 45 | 255.5 | 42.7 | 215 | 13 | Q73721 | Q73721 tilapia sp. |

ALIGNMENTS

RESULT 1

| | | | |
|---|--------------|------|---------|
| Q8CAR0 | PRELIMINARY; | PRT, | 165 AA. |
| AC Q8CAR0; | | | |
| DT 01-MAR-2003 (TREMBLrel. 23, Created) | | | |
| DT 01-MAR-2003 (TREMBLrel. 23, last sequence update) | | | |
| DT 01-OCT-2003 (TREMBLrel. 25, last annotation update) | | | |
| DE Unknown EST. | | | |
| GN C730016P09R1K. | | | |
| OS Mus musculus (Mouse). | | | |
| CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; | | | |
| OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. | | | |
| OX NCBI_TaxID=10990; | | | |
| RN [1] | | | |
| RP SEQUENCE FROM N.A. | | | |
| RC STRAIN=C57BL/6J; TISSUE=Thymus; | | | |
| RX MEDLINE=22354683; PubMed=12466851; | | | |
| RA The FANTOM Consortium, | | | |
| RA The RIKEN Genome Exploration Research Group Phase I & II Team; | | | |
| RT "Analysis of the mouse transcriptome based on functional annotation of | | | |
| RT 60,770 full-length cDNAs." | | | |
| RL Nature 420:563-573(2002). | | | |
| DR EMBL; AK038119; BAC29934.1; - | | | |
| DR MCB; MGI:2444166; C730016P09R1K. | | | |
| DR GO; GO:0005576; C:extracellular; IEA. | | | |
| DR GO; GO:0005179; F:hormone activity; IEA. | | | |
| DR GO; GO:0007582; P:physiological processes; IEA. | | | |
| DR InterPro; IPR004825; Ims/IGF/relax. | | | |
| DR Pfam; PF00049; Insulin; 1. | | | |
| DR PRINTS; PR00277; INSULINB. | | | |
| DR SMART; SM00078; IIGF; 1. | | | |
| DR PROSITE; PS00262; INSULIN; 1. | | | |
| SQ SEQUENCE 165 AA; 18473 MW; 2CE0D3DA981C93F8 CRC64; | | | |

Query Match 84.3%; Score 505; DB 11; Length 165;
Best local similarity 91.3%; Pred. No. 2.5e-52;
Matches 95; Conservative 2; Mismatches 7; Indels 0; Gaps 0;

1 GPELTGCAELVDALQFVCGPFGFVFNKPTVYGSIRRAQTGIVDECCFRSCDLRLNEMV 60